The ton per year emissions rate is an annual limit based on consecutive 12-month periods. The results of the calculations over the appropriate time period will be used to assure compliance.

17. TEST AREA NORTH

17.1 Current Permits To Construct

May 14, 1998	PTC No. 023-00001 issued for the boilers at TAN 603
May 20, 2004	PTC No. P-030542 issued for the SMC

17.2 Source Description

The Test Area North (TAN) is in the northern part of the INEEL site and presently consists of the Technical Support Facility (TSF) and the Specific Manufacturing Capability (SMC) Project. A private contractor operates each of the operational areas at TAN on behalf of DOE-ID.

The TSF area functions as the administrative and support hub of TAN and houses many important programs, including a Hot Shop and cells for remote disassembly and repair of radioactive assemblies and a pool for spent fuel storage. Assembly crafts and maintenance for TAN/TSF is centered at TSF. The SMC project provides maintenance for the classified areas of SMC.

The SMC is located in an area formerly known as the CTF. The northwest area of CTF includes the reactor control and equipment buildings and numerous CTF support facilities. The SMC project was assigned to TAN in mid-1983 as a military-related project. It is a multiphased manufacturing operation that produces armor packages for the U.S. Army. Facilities that support SMC operations are located at the CTF area of TAN. Several existing facilities were modified and new facilities were constructed to contain the research and manufacturing operations equipment used at SMC. The SMC project also consists of typical maintenance and support facilities that support two major process areas.

Fabrication and Assembly / Rolling Operations.

Additionally, SMC performs new and original work with a variety of relatively unconventional materials. However, these materials are used in small quantities. While radionuclide emissions from SMC are generally limited to those present in depleted uranium, monolithic and/or structurally stable bodies of relatively pure and/or alloyed metals may be used in tests and/or production of fabricated parts. The SMC project is a state-of-the-art research and manufacturing complex.

17.3 Regulatory Analysis

17.3.1 GENERAL INFORMATION

Two common changes to "applicable requirements" in the PTCs were made consistently throughout the Tier I operating permit. First, the Tier I operating permit requires records to be maintained onsite for five-year periods whereas many PTCs require that records be maintained for two-year periods. This is because IDAPA 58.01.01.322.07(c) requires that Tier I operating permit records be maintained for a five-year period.

Second, the Tier I permit establishes emissions limits and throughput limits "per consecutive 12-month period" whereas some PTC permit conditions limit emissions to "yearly." When the PTC conditions were written, "year" was defined as a "calendar year"' by the *Rules*. The Tier I permit now makes it clear that "yearly" emissions means consecutive 12-month periods. The change from the original form is the direct result of a change in DEQ/EPA policy.

17.3.2 SMC, TAN 629: PHASE I [PTC NO. P-030501, 5/20/04]

This section contains information about emissions from the TAN 629 Production Line 4, which vents to TAN 629-002. Production operations on Line 4 generally include laser cutting, punching, storage, and stacking of stainless metals and organic composite materials. Stack TAN 629-013 vents all Line 2 process equipment and the TAN 629 Line 2 containment enclosure.

Existing Permit Condition – Radionuclide Emissions [PTC No. P-030501, 5/20/04]

"1.1 Radionuclide Emissions

This source shall operate within the requirements of EPA National Emission Standards for Radionuclide Emissions from Department of Energy Facilities (CFR 40 Part 61.90). Radionuclide emissions from stack TAN 629-013 shall not by themselves, or in combination with emissions from other INEEL sources, cause any individual to receive a dose of greater than 10 millirems per year EDE."

"APPENDIX A: Emission Rate Limits

U.S. DEPARTMENT OF ENERGY / INEEL SMC Project
PROCESSING EMISSION RATE LIMITS[a]

Emission Unit	$PM/_{PM10}$ (T/yr)	Styrene (T/yr)	Benzene (T/yr)	VOC (T/yr)	RAD
TAN 629-013 Process Stack	---	---	---	---	b, c

[a] As determined by a pollutant specific U.S. EPA reference method, or DEQ approved alternative, or as determined by DEQ's emission estimation methods used in this permit analysis.
[b] Combined limit of 0.1 mrem/yr for TAN [629-013], TAN 679-022, TAN 679-023, and TAN 679-024.
[c] Radionuclide emissions from these sources shall not by themselves, or in combination with emissions from other INEEL sources, cause any individual to receive a dose of greater than 10 millirems per year effective dose equivalent."

Note that only the portion of Appendix A that includes TAN 629-013 is presented above. It is also noted that there is a typographical error in footnote b in the PTC. The term "TAN 679-013" is incorrect. The correct term is "TAN 629-013".

Applicable Requirement as it Appears in the Tier I Operating Permit

PTC Condition 1.1 is incorporated in the Tier I permit as a Facility-Wide requirement. Refer to the "National Emission Standards for Emissions of Radionuclides other than Radon from Department of Energy Facilities" requirement in Section 2.

Existing Permit conditions – Particulate and VOC Emission Limit [PTC No. P-030501, 5/20/04]

"1.1.2 Particulate Emissions

Emissions of PM and PM_{10} from stack TAN 629-002 shall not exceed any corresponding emission rate limit listed in Appendix A."

"1.1.3 VOC Emissions

The VOC emissions from stack TAN 629-002 shall not exceed any corresponding emission rate limit listed in Appendix A."

"APPENDIX A: Emission Rate Limits

U.S. DEPARTMENT OF ENERGY / INEEL SMC Project
PROCESSING EMISSION RATE LIMITS[a]

Emission Unit	$PM/_{PM10}$ (T/yr)	Styrene (T/yr)	Benzene (T/yr)	VOC (T/yr)	RAD
TAN 629-002: Phase I Stack	0.007	0.0085	0.0085	0.0403	---

[a] As determined by a pollutant specific U.S. EPA reference method, or DEQ approved alternative, or as determined by DEQ's emission estimation methods used in this permit analysis."

Note that only the portion of Appendix A that includes TAN 629-002 is presented.

Applicable Requirement as it Appears in the Tier I Operating Permit

The applicable requirements were combined into a single permit condition and placed into the Tier I permit with no change.

"8.1.1 Emissions of PM, PM_{10}, and VOC from stack TAN 629-002 shall not exceed any emission rate limit listed in the table below.

U.S. DEPARTMENT OF ENERGY / INEEL SMC Project
PROCESSING EMISSION RATE LIMITS[a]

Emission Unit	PM/PM_{10} T/yr [b]	VOC T/yr [b]
TAN 629-002 Phase I Stack	0.007	0.0403

[a] As determined by a pollutant specific U.S. EPA reference method, or DEQ approved alternative, or as determined by the DEQ's emission estimation methods used in this permit analysis.

[b] As determined by multiplying the actual or allowable (if actual is not available) pound-per-hour emissions rate by the allowable hours per year that the processes may operate, or by actual annual production rates."

Compliance Assurance

The existing PTC has insufficient monitoring and recordkeeping requirements. In accordance with IDAPA 58.01.01.322.06 and .07, the following monitoring and recordkeeping were developed for these emission limits to assure compliance with the existing applicable requirements.

"8.1.2 The permittee shall maintain a record of the material throughput per month and each calendar year associated with stack TAN 629-002. This record shall be maintained onsite for the most recent five-year period and shall be made available to DEQ representatives upon request."

After collecting the operational data, the permittee will then use a calculation methodology to assure compliance with the emissions limit in Permit Condition 8.1.1. The methodology is explained further in Volume VII, page 48 of the Operating Permit application. Essentially, the calculation takes the percent of throughput that is emitted multiplied by the throughput over a time period and then uses a factor that takes into account any filters applied to the process.

"8.1.3 On a calendar year basis, using data collected in Permit Condition 8.1.2 the permittee shall calculate and record the PM/PM10 and VOC emissions per calendar year from stack TAN 629-002. The recordkeeping shall include all calculations and assumptions used in performing the calculations. The most recent five-year compilation of data shall be kept onsite and shall be made available to DEQ representatives upon request."

TAN 677 – Welding Operations

TAN 677 is used to perform maintenance welding and other metal working activities in support of the SMC project. Equipment typically located here includes welders, lathes, and milling machines. The TAN 677 facility is also used to perform production plasma-arc metal cutting activities. Production plasma-arc metal cutting activities support the TAN 629 manufacturing operation by cutting steel plate to various shapes for later use in the assembly production line.

Existing Permit Condition – Particulate Emissions Limit [PTC No. P-030501, 5/20/04]

"2.1 Particulate Emissions

The PM and PM_{10} emissions from stack TAN 677-030 shall not exceed any corresponding emission rate limit listed in Appendix A.

"APPENDIX A: Emission Rate Limits

U.S. DEPARTMENT OF ENERGY / INEEL SMC Project
PROCESSING EMISSION RATE LIMITS[a]

Emission Unit	PM/PM_{10} (T/yr)	Styrene (T/yr)	Benzene (T/yr)	VOC (T/yr)	RAD
TAN 677-030: Process stack – welding and cold machine shop	0.0078	---	---	---	---

[a] As determined by a pollutant specific U.S. EPA reference method, or DEQ approved alternative, or as determined by DEQ's emission estimation methods used in this permit analysis."

Note that only the portion of Appendix A that includes TAN 677-030 is presented.

Applicable Requirement as it Appears in the Tier I Operating Permit

PTC Condition 2.1 is incorporated in the Tier I permit. The Tier I permit condition appears as follows:

"8.2.1 The PM and PM_{10} emissions from stack TAN 677-030 shall not exceed any emission rate limit listed in the table below.

U.S. DEPARTMENT OF ENERGY / INEEL SMC Project
PROCESSING EMISSION RATE Limit

Emission Unit	PM/PM_{10} T/yr [b]
TAN 677-030 Process Stack - welding and cold machine shop	0.0078

[a] As determined by a pollutant specific U.S. EPA reference method, or DEQ approved alternative, or as determined by DEQ's emission estimation methods used in this permit analysis.

[b] As determined by multiplying the actual or allowable (if actual is not available) pound-per-hour emissions rate by the allowable hours per year that the processes may operate, or by actual annual production rates."

Compliance Assurance

Monitoring and recordkeeping requirements for purposes of demonstrating compliance with the emissions limit are included in the PTC as PTC Condition 2.1.2. This permit condition was incorporated into the Tier I permit as described below. PTC Condition 2.1.2 alone does not provide sufficient monitoring for purposes of demonstrating compliance with the applicable requirement.

Therefore, in accordance with IDAPA 58.01.01.322.06 and .07, additional monitoring and recordkeeping was developed and incorporated into the Tier I permit. This additional monitoring uses the welding rod throughput obtained form PTC Condition 2.1.2, and the permittee will then use a calculation methodology to assure compliance with the emissions limit specified by the applicable requirement. The methodology is explained in Volume VII, page 83 of the Tier I Operating Permit application. Essentially, the calculation takes the pounds of welding rod used per time period multiplied by an emission factor. The additional monitoring is presented in the Tier I permit as follows:

"8.2.3 The permittee shall calculate and record the emissions per calendar year for TAN 677-030 using the data collected in Permit Condition 8.2.2 and appropriate EPA AP-42 or manufacturer-supplied emissions factors, or a DEQ-approved alternative method. The recordkeeping shall include all calculations and assumptions used in performing the calculations. The most recent five-year compilation of data shall be maintained onsite and shall be made available to DEQ representatives upon request."

Existing Permit Condition – Weld Material Usage [PTC No. P-030501, 5/20/04]

"2.1.2 Weld Material Usage

The permittee shall maintain a record of the amount of weld material used per calendar year. This records shall be maintained on-site for two years and shall be made available to DEQ representatives upon request."

Applicable Requirement as it Appears in the Tier I Operating Permit

"8.2.2 The permittee shall maintain a record of the amount of welding material used each calendar year that is associated with stack TAN 677-030. This record shall be maintained onsite for the most recent five-year period and shall be made available to DEQ representatives upon request."

TAN 679 – Phase II

The Rolling Operations and Fabrication facility consists of TAN 679. The TAN 679 houses the north and south manufacturing process areas, a boiler room, and various maintenance support areas. The TAN 679-025, TAN 679-026, TAN 679-027, and TAN 679-099 facility comprise the south process production areas. The south process operations includes a salt bath for preparing billets for rolling operations, a rolling mill, a water quench for cooling rolled materials prior to conveyance into the north process area, a horizontal mill for sawing DU, and an oxidation oven for processing DU chips and fines. South process operations are primarily designed for fabrication from uranium billets, but have the capability to work with other metal types as well. A welding hood, TAN 679-099, supports maintenance welding activities conducted at SMC. The rolled material from the south process is moved to the north process shearing station by an automated conveyor system. The parts are sheared to size, heated, leveled, cleaned with high-pressure water jet system, and inspected. In addition, a production laser is located within the north process area to support operations. This laser is used to cut carbon and stainless steel only. North process emissions vent through Stacks TAN 679-022, TAN 679-023, and TAN 679-024.

Existing Permit Condition – Radionuclide Emissions Limit [PTC No. P-030501, 5/20/04]

"3.1 Radionuclide Emissions

This source shall operate within the requirements of EPA National Emission Standards for Radionuclide Emissions from Department of Energy Facilities (CFR 40 Part 61.90). Radionuclide emissions from stacks TAN 679-022, TAN 679-023, TAN 679-024, TAN 679-025, TAN 679-026, and TAN 679-027 shall not by themselves, or in combination with emissions from other INEEL sources, cause any individual to receive a dose of greater than 10 mrem/yr EDE."

"U.S. DEPARTMENT OF ENERGY / INEEL SMC Project
PROCESSING EMISSION RATE LIMITS[a]

Emission Unit	PM/PM_{10} (T/yr)	Styrene (T/yr)	Benzene (T/yr)	VOC (T/yr)	RAD
TAN 679-TAN 679-022, 023, 024: Phase II-Phase II – north (3 stacks)	---	---	---	0.004	b, c
TAN 679-TAN 679-025, 026, 027: Phase II-Phase II – south (3 stacks)	---	---	---	0.048	c

[a] As determined by a pollutant specific U.S. EPA reference method, or DEQ approved alternative, or as determined by DEQ's emission estimation methods used in this permit analysis.
[b] Combined limit of 0.1 mrem/yr for TAN [629-013], TAN 679-022, TAN 679-023, and TAN 679-024.
[c] Radionuclide emissions from these sources shall not by themselves, or in combination with emissions from other INEEL sources, cause any individual to receive a dose of greater than 10 millirems per year effective dose equivalent."

Note that only the portion of Appendix A that includes TAN 679-022, TAN 679-023, TAN 679-024, TAN 679-025, TAN 679-026, and TAN 679-027 is presented above.

Applicable Requirement as it Appears in the Tier I Operating Permit

PTC Condition 3.1 is incorporated in the Tier I permit as a Facility-Wide requirement. Refer to the "National Emission Standards for Emissions of Radionuclides other than Radon from Department of Energy Facilities" requirement in Section 2.

Existing Permit Condition – Particulate Emissions Limit [PTC No. P-030501, 5/20/04]

"3.1.2 Particulate Emissions

PM and PM_{10} emissions from stack TAN 679-099 shall not exceed any emission rate limit listed in Appendix A."

"APPENDIX A: Emission Rate Limits

U.S. DEPARTMENT OF ENERGY – INEEL
SPECIFIC MANUFACTURING CAPABILITIES (SMC) PROJECT[A]

Emission Unit	PM/PM_{10} T/yr	Styrene T/yr	Benzene T/yr	VOC T/yr	RAD
TAN 679-099 Maintenance Welding Shop Hood	0.001				

[a] As determined by a pollutant specific U.S. EPA reference method, or DEQ approved alternative, or as determined by DEQ's emission estimation methods used in this permit analysis.
[b] Combined limit of 0.1 mrem/yr for TAN 679-013, TAN 679-022, TAN 679-023, and TAN 679-024.
[c] Radionuclide emissions from these sources shall not by themselves, or in combination with emissions from other INEEL sources, cause any individual to receive a dose of greater than 10 millirems per year effective dose equivalent."

Note that only the portion of Appendix A that includes TAN 679-099 is presented.

Applicable Requirement as it Appears in the Tier I Operating Permit

"8.3.1 The PM and PM_{10} emissions from stack TAN 679-099 shall not exceed any corresponding emission rate limit listed in the table below.

U.S. DEPARTMENT OF ENERGY / INEEL SMC Project
PROCESSING EMISSION RATE LIMIT[a]

Emission Unit	PM/PM_{10} T/yr[b]
TAN 679-099: Maintenance welding shop hood	0.001

[a] As determined by a pollutant specific U.S. EPA reference method, or DEQ approved alternative, or as determined by the DEQ's emission estimation methods used in this permit analysis.
[b] As determined by multiplying the actual or allowable (if actual is not available) pound-per-hour emissions rate by the allowable hours per year that the processes may operate, or by actual annual production rates."

Compliance Assurance

Sufficient monitoring and recordkeeping to assure compliance with the PM/PM_{10} emission rate limit from TAN 679-099 are not included in the PTC. PTC Condition 3.4.1 requires records of the annual welding rod usage and this was included in the Tier I permit. In addition, in accordance with IDAPA 58.01.01.322.06 and .07, an additional Tier I monitoring and recordkeeping condition was developed to assure compliance with the limit and it appears as follows:

"8.3.6 The permittee shall calculate and record the PM/PM_{10} emissions per each calendar year from TAN 679-099. The recordkeeping shall include all calculations and assumptions used in performing the calculations. The most recent five-year compilation of data shall be maintained onsite and shall be made available to DEQ representatives upon request."

The permittee will use a calculation methodology to assure compliance with the emissions limit in Permit Condition 8.3.1. For TAN 679-099, the methodology is explained further in Volume VII, page 101 of the operating permit application. Essentially, the calculation takes the pounds of welding rod used per time period multiplied by an emission factor.

Existing Permit Condition – VOC Emissions Limit [PTC No. P-030501, 5/20/04]

"3.1.3 VOC Emissions

The VOC emissions from stacks TAN 679-022, TAN 679-023, TAN 679-024 (in north manufacturing area), TAN 679-025, Tan 679-026, and TAN 679-027 (south manufacturing area) shall not exceed any corresponding emissions rate limit listed in Appendix A."

"APPENDIX A: Emission Rate Limits

U.S. DEPARTMENT OF ENERGY – INEEL
SPECIFIC MANUFACTURING CAPABILITIES (SMC) PROJECT[A]

Emission Unit	PM/PM_{10} T/yr	Styrene T/yr	Benzene T/yr	VOC T/yr	RAD
TAN 679-TAN 679-022, 023, 024: Phase II- Phase II – north (3 stacks)	---	---	---	0.004	b, c
TAN 679-TAN 679-025, 026, 027: Phase II- Phase II – south (3 stacks)	---	---	---	0.048	c

[a] As determined by a pollutant specific U.S. EPA reference method, or DEQ approved alternative, or as determined by DEQ's emission estimation methods used in this permit analysis.
[b] Combined limit of 0.1 mrem/yr for TAN 679-013, TAN 679-022, TAN 679-023, and TAN 679-024.
[c] Radionuclide emissions from these sources shall not by themselves, or in combination with emissions from other INEEL sources, cause any individual to receive a dose of greater than 10 millirems per year effective dose equivalent."

Note that only the portion of Appendix A that includes TAN 679-022, TAN 679-023, TAN 679-024, TAN 679-025, Tan 679-026, and TAN 679-027 are presented.

Applicable Requirement as it Appears in the Tier I Operating Permit

"8.3.2 The VOC emissions from stacks TAN 679-022, TAN 679-023, TAN 679-024 (in north manufacturing area), TAN 679-025, TAN 679-026, and TAN 679-027 (in south manufacturing area) shall not exceed any corresponding emissions rate limit listed in the table below.

U.S. DEPARTMENT OF ENERGY / INEEL SMC Project
PROCESSING EMISSION RATE LIMIT[a]

Emission Unit	VOC T/yr [b]
TAN 679-022, 023, 024: Phase II – north (3 stacks)	0.004
TAN 679-025, 026, 027: Phase II – south (3 stacks)	0.0048

[a] As determined by a pollutant specific U.S. EPA reference method, or DEQ approved alternative, or as determined by the DEQ's emission estimation methods used in this permit analysis.

[b] As determined by multiplying the actual or allowable (if actual is not available) pound-per-hour emissions rate by the allowable hours per year that the processes may operate, or by actual annual production rates."

Compliance Assurance

Sufficient monitoring and recordkeeping to assure compliance with the VOC emission rate limits are not included in the PTC. In accordance with IDAPA 58.01.01.322.06 and .07, additional Tier I monitoring and recordkeeping conditions were developed to assure compliance with the limit and they appear as follows:

"8.3.7 The permittee shall maintain a record of the type and amount of VOCs used per calendar year at TAN 679-022, TAN 679-023, and TAN 679-024 (Laboratory). This record shall be maintained onsite for the most recent five-year period and shall be made available to DEQ representatives upon request."

"8.3.8 The permittee shall maintain a record of the gallons of lube oil used per consecutive 12-month period at TAN 679-025, TAN 679-026, and TAN 679-027 (Rolling Mill). This record shall be maintained onsite for the most recent five-year period and shall be made available to DEQ representatives upon request."

"8.3.9 The permittee shall calculate and record the VOC emissions per consecutive 12-month period from TAN 679-022, TAN 679-023, TAN 679-024, TAN 679-025, TAN 679-026, and TAN 679-027 (Rolling Mill and Laboratory). The most recent five-year compilation of data shall be maintained onsite and shall be made available to DEQ representatives upon request."

The permittee will then use a calculation methodology to assure compliance with the VOC emissions limits. For TAN 679-022, TAN 679-023, and TAN 679-024, the methodology is explained further in Volume VII, page 121 of the Operating Permit application. Essentially, the methodology is to multiply the appropriate resuspension factor by the amount of VOC used per a time period. For TAN 679-025, TAN 679-026, and TAN 679-027, the methodology is explained further in Volume VII, page 100-101 of the Operating Permit application. Simplified, the methodology is to multiply the gallons of lube oil used per time period by the resuspension factor of lube oil and the density of lube oil.

Existing Permit Condition – Weld Material Usage [PTC No. P-030501, 5/20/04]

"3.4.1 The permittee shall maintain a record of the amount of weld material used per calendar year. This record shall be maintained on-site for two years and shall be made available to DEQ representatives upon request."

Applicable Requirement as it Appears in the Tier I Operating Permit

This PTC monitoring condition was changed to indicate the specific location. The Tier I permit condition appears as follows:

"8.3.4 The permittee shall maintain a record of the amount of weld material used each calendar year at TAN 679-099 (Maintenance welding shop hood). This record shall be maintained kept onsite for the most recent five-year period and shall be made available to DEQ representatives upon request."

Existing Permit Condition – Production Limits [PTC No. P-030501, 5/20/04]

"3.2.1 The permittee shall not process more than 54 part per 10-hour shift for R&D production or 125 parts per 10-hour shift for regular production."

Applicable Requirement as it Appears in the Tier I Operating Permit

This PTC condition was included in the Tier I permit with no changes.

Compliance Assurance

The monitoring and recordkeeping in the PTC are not sufficient to show compliance with the production limit given by PTC Condition 3.2.1. In accordance with IDAPA 58.01.01.322.06 and .07, monitoring and recordkeeping was developed for this limit to assure compliance with the existing applicable requirement. This requirement appears in the Tier I permit as follows:

"8.3.5 At TAN 679, the permittee shall maintain a record of the number of parts processed per shift for R&D production and the number of parts processed per shift for regular production. This record shall be maintained onsite for the most recent five-year period and shall be made available to DEQ representatives upon request."

TAN 681 – Process Reclamation Facility (PRF)

Process wastewater from the north manufacturing area processes is diverted to the TAN-681-PRF for separation of wastes and reprocessing. Stacks TAN 681-018 and TAN 681-020 are primarily used to collect and filter ambient room process air.

Existing Permit Condition – Radionuclide Emissions [PTC No. P-030501, 5/20/04]

"4.1 Radionuclide Emissions

This source shall operate within the requirements of EPA National Emission Standards for Radionuclide Emissions from Department of Energy Facilities (CFR 40 Part 61.90). Radionuclide emissions from stacks TAN 681-018 and TAN 681-020 shall not by themselves, or in combination with emissions from other INEEL sources, cause any individual to receive a dose of greater than 10 millirems per year EDE."

"APPENDIX A: Emission Rate Limits

U.S. DEPARTMENT OF ENERGY / INEEL SMC Project
PROCESSING EMISSION RATE LIMITS[a]

Emission Unit	$PM/_{PM10}$ (T/yr)	Styrene (T/yr)	Benzene (T/yr)	VOC (T/yr)	RAD
TAN 681-018, 020: Process Stacks	---	---	---	---	c

[a] As determined by a pollutant specific U.S. EPA reference method, or DEQ approved alternative, or as determined by DEQ's emission estimation methods used in this permit analysis.
[b] Combined limit of 0.1 mrem/yr for TAN [629-013], TAN 679-022, TAN 679-023, and TAN 679-024.
[c] Radionuclide emissions from these sources shall not by themselves, or in combination with emissions from other INEEL sources, cause any individual to receive a dose of greater than 10 millirems per year effective dose equivalent."

Note that only the portion of Appendix A that includes TAN 681-018 and TAN 681-020 is presented above.

Applicable Requirement as it Appears in the Tier I Operating Permit

PTC Condition 4.1 is incorporated in the Tier I permit as a Facility-Wide requirement. Refer to the "National Emission Standards for Emissions of Radionuclides other than Radon from Department of Energy Facilities" requirement in Section 2.

State-only Permit conditions

Existing Permit Condition – HEPA Filter Requirements [PTC No. P-030501, 5/20/04]

"4.2 The permittee shall operate the stack TAN 681-018 and TAN 681-020 HEPA filters as specified in Appendix B."

"4.3 The permittee shall monitor the stack TAN 681-018 and TAN 681-020 HEPA filters as specified in Appendix B."

"4.4 The permittee shall submit a report on HEPA filter operation as specified in Appendix B of this permit."

Applicable Requirement as it Appears in the Tier I Operating Permit

These permit conditions are not applicable requirements by definition (found in IDAPA 58.01.01.008.03.b) because they relate to assuring compliance with the state's toxic substances regulation (IDAPA 58.01.01.161) therefore, they are not included in the Tier I operating permit.

SMC Fuel Burning Equipment

Two identical boilers, located in TAN 679, have a rated maximum heat input capacity of 25 MMBtu/hr and operate as necessary to supply building heat and process steam to SMC fabrication and manufacturing facilities. Another small boiler with a 60-hp rating is normally operated during summer months only. The large boilers are each equipped with oxygen trim sensors to increase combustion efficiency. Combustion gases from each large boiler are exhausted through individually dedicated stacks, TAN 679-067 and TAN 679-068. The small 60-hp boiler also vents to TAN 679-067.

Existing Permit Condition – Criteria Pollutants Emissions Limits [PTC No. P-030501, 5/20/04]

"5.1 Criteria Pollutant Emissions

Emissions of PM, PM_{10}, SO_2, NO_x, CO, and VOC from the boilers shall not exceed any corresponding emission rate limit listed in Appendix A."

"APPENDIX A

U.S. DEPARTMENT OF ENERGY / INEEL SMC PROJECT
FUEL-BURNING EQUIPMENT EMISSION RATE LIMITS[a]

Emission Unit	PM/PM_{10}		SO_2		CO		NO_x		VOC	
	Lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr
Two (2) 25 MM BTU/hr Boilers and one (1) 60HP Boiler	0.57	2.21	19.83	79.33	1.39	5.52	5.53	22.13	0.056	0.22

[a] As determined by a pollutant specific U.S. EPA reference method, or DEQ approved alternative, or as determined by DEQ's emission estimation methods used in this permit analysis."

Note that only the portion of Appendix A that includes fuel-burning equipment is presented.

Applicable Requirement as it Appears in the Tier I Operating Permit

Additional information was added to the table footnotes to clarify how to determine compliance with the emission rate limits. In addition, the PTC condition was changed to clarify that the hourly emissions limits are based on a daily average, and the annual emissions limits are based on consecutive 12-month periods. The boiler emission rate limits appear in the Tier I permit as follows:

"8.4.1 Combined emissions of PM, PM_{10}, SO_2, NO_x, CO, and VOCs from TAN 679-067 and TAN 679-068 shall not exceed any corresponding emissions rate limit listed in the table below.

BOILER EMISSIONS LIMITS[a] - HOURLY (lb/hr) AND ANNUAL[b] (T/yr)[d]

Emissions Units	PM/PM_{10}		SO_2		CO		NO_x		VOC	
	lb/hr[c]	T/yr[d]	lb/hr[c]	T/yr[d]	lb/hr[c]	T/yr[d]	lb/hr[c]	T/yr[d]	lb/hr[c]	T/yr[d]
TAN 679-067 (25 MMBtu/hr and 60 hp boilers), and TAN 679-068 (25 MMBtu/hr boiler)	0.57	2.21	19.83	79.33	1.39	5.52	5.53	22.13	0.056	0.22

[a] As determined by a pollutant-specific EPA reference method, or DEQ-approved alternative, or as determined by the DEQ's emissions estimation methods used in the PTC permit analysis.
[b] As determined by multiplying the actual or allowable (if actual is not available) pound-per-hour emissions rate by the allowable hours per year that the process(es) may operate.
[c] average pounds per hour based on a daily average.
[d] tons per consecutive 12-month period."

Compliance Assurance

The monitoring and recordkeeping in the PTC are not sufficient to show compliance with the PTC emission rate limits. In accordance with IDAPA 58.01.01.322.06 and .07, monitoring and recordkeeping conditions were developed for these limits to assure compliance with the existing applicable requirement. These conditions appear in the Tier I permit as follows:

"8.4.2 When the SMC facility is operating, the permittee shall monitor and record the daily, monthly, and consecutive 12-month period fuel consumption and type of fuel consumed by the three boilers that vent to stacks TAN 679-067 and TAN 679-068. The most recent five-year compilation of data shall be maintained onsite and shall be made available to DEQ representatives upon request."

Compliance with the hourly and annual emissions limits is assured through monitoring the boiler fuel usage and demonstrating that the combined fuel flow rates of the 60 hp boiler and the two 25 MMBtu/hr boilers do not exceed 165 gal/hr, based on a daily average, and 1, 290,000 gallons per consecutive 12 month period. This fact is demonstrated in the table below. The allowable fuel flow rates were calculated using appropriate EPA AP-42 emissions factors and the emission rate limits specified in the PTC:

EMISSIONS FACTORS AND THE EMISSION RATE LIMITS

Pollutant	Emission Factor (lb/1000 gal)	Hourly PTC Emission Limit (lb/hr)	Annual PTC Emission Limit (T/yr)	Allowable Fuel[a] Flow Rate (gal/hr)	Allowable Fuel[b] Flow Rate (gal/yr)
CO	5	1.39	5.52	278	2,210,000
PM / PM_{10}	3.3	0.57	2.21	173	1,340,000
NO_x	17.2	5.53	22.13	322	2,570,000
SO_2	71	19.83	79.33	279	2,230,000
VOC	0.34	0.056	0.22	165	1,290,000

[a] Allowable Fuel Flow Rate (gal/hr) = (Hourly PTC Emission Limit) / (EF/1000)
[b] Allowable Fuel Flow Rate (gal/yr) = (Annual PTC Emission Limit)(8760 hr/yr)(2000 lb/ton)/(EF/1000)

Compliance or noncompliance with an hourly emissions limit may be demonstrated by using the following equation:

(X_a lb/1,000 gal)(Y gal/day)(1 day/Z hr) = X lb/hr

Where X_a = emissions factor for fuel burned;
Y = daily fuel usage; and
Z = total hrs of individual boiler operation during the day.

Compliance or noncompliance with an annual emissions limit may also be demonstrated using the following equation:

(X_a lb/1,000 gal)(Y gal/yr)(1 T/2,000 lbs) = X T/yr

Where X_a = emissions factor for fuel burned; and
Y = annual fuel usage, based on a consecutive 12-month period.

The ton per year emissions rate is an annual limit based on consecutive 12-month periods. The results of the calculations over the appropriate time period may also be used to assure compliance.

Existing Permit Condition – Opacity Limits [PTC No. P-030501, 5/20/04]

"5.1.2 Opacity Limits

Visible emissions from the boiler and generator stacks shall not exceed 20% opacity for a period or periods aggregating more than three-minutes in any 60 minutes as required in IDAPA 58.01.01.625 and as determined using procedures contained in IDAPA 58.01.01.625."

Applicable Requirement as it Appears in the Tier I Operating Permit

PTC Condition 5.1.2 is incorporated in the Tier I permit as a Facility-Wide requirement. Refer to the "Visible Emissions" requirement located in Section 2.

Existing Permit Condition – Exhaust Grain Loading Emissions Limits [PTC No. P-030501, 5/20/04]

"5.1.3 Exhaust Grain Loading

The emission of PM from each boiler shall not exceed 0.05 gr/dscf of effluent gas corrected to 3% oxygen by volume when No. 2 fuel oil (ASTM Grade 2) is combusted, as required by IDAPA 58.01.01.676."

Applicable Requirement as it Appears in the Tier I Operating Permit

PTC Condition 5.1.3 is incorporated in the Tier I permit as a Facility-Wide requirement. Refer to the "Fuel-burning Equipment" requirement located in Section 2.

Existing Permit Condition – Fuel Sulfur Content [PTC No. P-030501, 5/20/04]

"5.2 Fuel Sulfur Content

The sulfur content of the No. 2 fuel oil shall not exceed 0.5% by weight as required by IDAPA 58.01.01.728."

Applicable Requirement as it Appears in the Tier I Operating Permit

PTC Condition 5.2 is incorporated in the Tier I permit as a Facility-Wide requirement. Refer to the "Sulfur Content" requirement located in Section 2.

Existing Permit Condition – Performance Test [PTC No. P-030501, 5/20/04]

"5.3 Performance Test

The permittee has conducted and demonstrated compliance with this PTC condition and the following initial source testing requirements, as required by the original issuance of this PTC.

The permittee shall conduct a performance test, in accordance with General Provision 6 of this permit, to measure SO_2 emissions from one of the boilers using EPA Method 6 (40 CFR Appendix A) or an equivalent method approved by DEQ. The sulfur content of the fuel burned in the test shall be reported with the performance test results."

Applicable Requirement as it Appears in the Tier I Operating Permit

This applicable requirement has been omitted from the Tier I Operating Permit. Per the July 10, 1995 White Paper for Streamlined Development of Part 70 Permit Applications: *"The EPA recognizes that NSR permits contain terms that are obsolete, extraneous, environmentally insignificant, or otherwise not required as part of the SIP or a federally-enforceable NSR program. Such terms...need not be incorporated into the part 70 permit..."* As further explained: *"...NSR permit terms and conditions may be patently obsolete and no longer relevant to the operation of the source, such as terms regulating construction activity during the building or modification of the source, where the construction is long completed and the statute of limitations on construction-phase activities has run out."* As certified in the application, this initial source testing was completed in November 1992; therefore, this requirement for initial source testing is obsolete. This PTC condition may be removed during the next PTC modification.

Existing Permit Condition – Performance Test Report [PTC No. P-030501, 5/20/04]

"5.4 Performance Test Report

The performance test data and results shall be reported to DEQ within 30 days of performing the test as required in Section 7.3."

Applicable Requirement as it Appears in the Tier I Operating Permit

This applicable requirement has been omitted from the Tier I operating permit for the same reasons noted above for PTC Condition 5.3. As certified in the application, this initial source testing data was reported to DEQ in December 1992; therefore, this requirement for reporting initial source testing data is obsolete.

Refuse Incinerator

The small package waste incinerator operates as a stand-alone treatment unit within the SMC facility and is not associated with SMC production operations. The waste incinerator is used to destroy paper, typewriter ribbons, and computer disks that contain classified or otherwise sensitive information. The types of waste burned in this incinerator are designated as Type 0 (Trash) and Type 1 (rubbish) waste. The incinerator has a dedicated discharge stack identified as TAN 681-023.

Existing Permit Condition – Particulate Emissions Limit [PTC No. P-030501, 5/20/04]

"6.1 Particulate

The refuse incinerator shall be operated in accordance with IDAPA 58.01.01.786 at a particulate emission rate of 0.2 pound of particulate per 100 pounds of refuse burned."

Applicable Requirement as it Appears in the Tier I Operating Permit

The hourly average was added to clarify the permit condition. IDAPA 58.01.01.786 states that the averaging period shall be the lesser time period between one complete cycle of operation of the incinerator and one hour of operation. The permittee must comply with this rule, and since it is likely that the one hour averaging period would be the most stringent, this has been added to the permit condition. In the event the one-hour averaging period is not more stringent, the permittee shall operate in accordance with IDAPA 58.01.01.786 and base compliance on one complete cycle of operation. The PTC condition was revised to make the requirements more clear as follows:

"8.5.1 The refuse incinerator shall be operated in accordance with IDAPA 58.01.01.786. The particulate emissions rate shall not exceed 0.2 pounds of particulate per 100 pounds of refuse burned based on an hourly average."

Compliance Assurance

The monitoring and recordkeeping in the PTC are not sufficient to show compliance with the PTC emission rate limits. In accordance with IDAPA 58.01.01.322.06 and .07, monitoring and recordkeeping conditions were developed for the emissions limit to assure compliance with the existing applicable requirement.

These monitoring requirements provide the data necessary to use a calculation methodology to determine PM emissions. The permittee will multiply the pounds of refuse by an appropriate EF to obtain the pounds of PM emitted. This will then be scaled to 100 pounds of refuse burned to assure compliance with the pounds of particulate per 100 pounds of refuse burned. The new monitoring conditions appear in the Tier I permit as given below:

"8.5.4 The permittee shall maintain a record of the pounds of refuse burned in the incinerator per hour. These records shall be maintained onsite for the most recent five-year period and shall be made available to DEQ representatives upon request."

"8.5.5 The permittee shall calculate and record the PM emissions per 100 pounds of refuse burned in the refuse incinerator, averaged hourly. The most recent five-year compilation of data shall be maintained onsite and shall be made available to DEQ representatives upon request."

Existing Permit Condition – Opacity Limit [PTC No. P-030501, 5/20/04]

"6.1.2 Opacity Limits

Visible emissions from the refuse incinerator stack shall not exceed 20% opacity for a period or periods aggregating more than three minutes in any 60 minutes as required by IDAPA 58.01.01.625 and as determined using the procedures contained in IDAPA 58.01.01.625."

Applicable Requirement as it Appears in the Tier I Operating Permit

PTC Condition 5.1.2 is incorporated in the Tier I permit as a Facility-Wide requirement. Refer to the "Visible Emissions" requirement located in Section 2.

Existing Permit Condition – Incinerator Operation [PTC No. P-030501, 5/20/04]

"6.2 Incinerator Operation

All personnel authorized to operate and/or maintain this incinerator shall be thoroughly trained and knowledgeable to perform their respective functions correctly as specified in the Operations and Maintenance documents originally provided by the permittee."

Applicable Requirement as it Appears in the Tier I Operating Permit

This requirement is included in the Tier I permit without any changes.

Compliance Assurance

The monitoring and recordkeeping in the PTC are not sufficient to show compliance with PTC Condition 6.2. In accordance with IDAPA 58.01.01.322.06 and .07, monitoring and recordkeeping requirements were developed to assure compliance with the existing applicable requirement. The new monitoring condition appears in the Tier I permit as given below:

"8.5.3 The permittee shall maintain job training schedules and records of personnel qualification for operation of the incinerator. These records shall be maintained onsite for the most recent five-year period and shall be made available to DEQ representatives upon request."

Existing Permit Condition – Performance Test [PTC No. P-030501, 5/20/04]

"6.3 Performance Test

The permittee has conducted and demonstrated compliance with the following initial source testing requirements, as required by the original issuance of this Permit to Construct:

In accordance with IDAPA 58.01.01.786.03, the appropriate test method shall be EPA Method 5 contained in 40 CFR Part 60 or such comparable and equivalent method approved in accordance with IDAPA 58.01.01.157.02.d. Test methods shall also comply with IDAPA 58.01.01.157."

Applicable Requirement as it Appears in the Tier I Operating Permit

This applicable requirement has been omitted from the Tier I operating permit per the guidance contained in the July 10, 1995 White Paper for Streamlined Development of Part 70 Permit Applications, as described above. As certified in the application, this source is in compliance with all existing permit requirements; therefore, this requirement for initial source testing is obsolete.

2B Paint Process

The 2B Paint Process consists of an automated pressurized air paint spray system and a drying and curing oven. Airborne pollutants generated during the painting/drying operation are vented through stacks TAN 629-012 and TAN 629-014.

Existing Permit Condition – Radionuclide Emissions [PTC No. P-030501, 5/20/04]

"4.1 Radionuclide Emissions

This source shall operate within the requirements of EPA National Emission Standards for Radionuclide Emissions from Department of Energy Facilities (CFR 40 Part 61.90)."

Applicable Requirement as it Appears in the Tier I Operating Permit

PTC Condition 4.1 is incorporated in the Tier I permit as a Facility-Wide requirement. Refer to the "National Emission Standards for Emissions of Radionuclides other than Radon from Department of Energy Facilities" requirement in Section 2.

Existing Permit Conditions – VOC, PM, PM_{10} Emissions Limits [PTC No. P-030501, 5/20/04]

"7.1.2 Volatile Organic Compounds

"Emissions of VOCs from stacks TAN 629-012 and TAN 629-014 shall not exceed any corresponding emissions rate limit listed in Appendix A."

"7.1.3 Particulate

"Emissions of PM and PM_{10} from stacks TAN 629-012 and TAN 629-014 shall not exceed any corresponding emissions rate limit listed in Appendix A."

"APPENDIX A

U.S. DEPARTMENT OF ENERGY – INEEL
SPECIFIC MANUFACTURING CAPABILITIES (SMC) PROJECT[A]

Emission Unit	PM/PM_{10}	Styrene	Benzene	VOC	RAD
	T/yr	T/yr	T/yr	T/yr	
TAN 629-012, 014 2B Paint Process	0.5	---	---	4.1	---

[a] As determined by a pollutant specific U.S. EPA reference method, or DEQ approved alternative, or as determined by DEQ's emission estimation methods used in this permit analysis."

Note that only the portion of Appendix A that includes TAN 629-012 and TAN 629-014 is presented.

Applicable Requirement as it Appears in the Tier I Operating Permit

The applicable requirements were combined into a single permit condition and placed into the Tier I permit with one change. The annual emission rate limits in tons per year (T/yr) were established based on any consecutive 12-month period and clarification on how to make this determination was provided as follows:

"8.6.1 Emissions of PM, PM_{10}, and VOC from stacks TAN 629-012 and TAN 629-014 shall not exceed any emission rate limit listed in the table below.

U.S. DEPARTMENT OF ENERGY / INEEL SMC Project
PROCESSING EMISSION RATE LIMITS[a]

Emission Unit	PM/PM_{10}	VOC
	T/yr [b]	T/yr [b]
TAN 629-012, 014: 2B Paint process	0.5	4.1

[a] As determined by a pollutant specific U.S. EPA reference method, or DEQ approved alternative, or as determined by the DEQ's emission estimation methods used in this permit analysis.

[b] As determined by multiplying the actual or allowable (if actual is not available) pound-per-hour emissions rate by the allowable hours per year that the processes may operate, or by actual annual production rates. The permittee shall not exceed the tons per year (T/yr) listed based on any consecutive 12-month period."

Compliance Assurance

The monitoring and recordkeeping in the PTC are not sufficient to show compliance with the emission limits. In accordance with IDAPA 58.01.01.322.06 and .07, monitoring and recordkeeping requirements were developed to assure compliance with the existing applicable requirements.

Compliance with the VOC emissions rate limit is assured using a calculation methodology. Additional detail is provided in Volume VII, pages 61-62 of the permit application. A simplified version of the calculation methodology is the number of parts per time period multiplied by the percent of material released per part. The additional VOC monitoring conditions appear in the Tier I permit as follows:

"8.6.2 The permittee shall maintain a record of the number of parts processed during the previous consecutive 12 months at the 2B Paint Process (vents to stacks TAN 629-012 and TAN 629-014). This record shall be maintained onsite for the most recent five-year period and shall be made available to DEQ representatives upon request."

"8.6.3 The permittee shall calculate and record the VOC emissions per consecutive 12-month period from TAN 629-012 and TAN 629-014. The most recent five-year compilation of data shall be maintained onsite and shall be made available to DEQ representatives upon request."

Compliance with the PM/PM_{10} emissions rate limit is assured using a calculation methodology. Additional detail is provided in Volume VII, pages 62 of the permit application. A simplified version of the calculation methodology is total material processed per time period multiplied by the particulate percent of material multiplied by the mitigation factor that accounts for any filters. The additional PM/PM_{10} monitoring conditions appear in the Tier I permit as follows:

"8.6.4 The permittee shall maintain a record of the amount of material processed during the previous consecutive 12-month period at the 2B Paint Process which vents to stacks TAN 629-012 and TAN 629-014. This record shall be maintained onsite for the most recent five-year period and shall be made available to DEQ representatives upon request."

"8.6.5 The permittee shall calculate and record the PM/PM_{10} emissions per consecutive 12-month period from TAN 629-012 and TAN 629-014. The most recent five-year compilation of data shall be maintained onsite and shall be made available to DEQ representatives upon request."

State-only Permit conditions

Existing Permit Condition – HEPA Filter Requirements [PTC No. P-030501, 5/20/04]

"7.2 The permittee shall operate the 2B Paint process HEPA filters as specified in Appendix B."

"7.3 The permittee shall monitor the 2B Paint process HEPA filters as specified in Appendix B."

"7.4 The permittee shall submit a report on HEPA filter operation as specified in Appendix B of this permit."

Applicable Requirement as it Appears in the Tier I Operating Permit

These permit conditions are not applicable requirements by definition (found in IDAPA 58.01.01.008.03.b) because they relate to assuring compliance with the state's toxic substances regulation (IDAPA 58.01.01.161) and are not included in the Tier I operating permit.

17.3.3 OIL-FIRED BOILER NO. 4 AND NO. 5, TAN 603 BUILDING [PTC NO. 023-00001, 5/14/98]

TAN-603 houses two identical 20.9 MMBtu/hr boilers that were installed in 1992. Both boilers use distillate fuel oil. The boilers are operated according to the facility heat demand.

Existing Permit Condition – SO_2 Emissions Limits [PTC No. 023-00001, 5/14/98]

"1.1 SO_2 Emission Limit

Sulfur dioxide (SO_2) emissions from the No. 4 and No. 5 boiler exhaust stacks shall not exceed 39.9 tons per consecutive 12-month period (39.9 T/yr) inclusive."

Applicable Requirement as it Appears in the Tier I Operating Permit

This requirement is included in the Tier I permit with no substantive changes.

Compliance Assurance

Compliance with this limit demonstrated by complying with the fuel sulfur content limit specified in PTC Condition 2.1 and the fuel oil throughput limit specified by PTC Condition 2.2. In turn, compliance with the fuel throughput limit and the fuel sulfur limit are addressed by PTC conditions 3.2 and 3.3, and by the fuel oil sulfur content monitoring requirements specified in the Facility-Wide Section of the Tier I permit. This fact is demonstrated below using the SO_2 emission factor from AP-42, Table 1.3-1, September, 1998, where "S" is the "weight % of sulfur in the oil":

(142S lb/1,000 gal)(Y gal/yr)(1 T/2,000 lbs) = X T/yr

Where: 142S = SO_2 emissions factor for No. 2 fuel oil; and

Y = annual fuel usage, based on a consecutive 12-month period.
S = weight % of sulfur in the oil = 0.5

(142)(0.5) lb/1000 gal)(1,120,000 gal/yr)(1 T/2000 lbs) = 39.8 T/yr

Existing Permit Condition – Visible Emissions [PTC No. 023-00001, 5/14/98]

"1.2 Visible Emissions

Visible emissions from the #4 and #5 boiler exhaust stacks shall not exceed 20% opacity for a period or periods aggregating more than three minutes in any 60 minute period in accordance with IDAPA 16.01.01.625. Opacity shall be determined using DEQ's "Procedures Manual for Air Pollution Control."

Applicable Requirement as it Appears in the Tier I Operating Permit

PTC Condition 1.2 is incorporated in the Tier I permit as a Facility-Wide requirement. Refer to the "Visible Emissions" requirement located in Section 2.

Existing Permit Condition – Fuel Sulfur Content Limit [PTC No. 023-00001, 5/14/98]

"2.1 Fuel Sulfur Content

"No fuel oil containing sulfur in excess of 0.5% by weight shall be burned in the boilers in accordance with 40 CFR 60.42(c) and IDAPA 16.01.01.728."

Applicable Requirement as it Appears in the Tier I Operating Permit

This PTC condition is included in the Tier I permit with no substantive changes. The word distillate was added to clarify the type of fuel regulated by 40 CFR 60.48 c (f). The permit condition appears in the Tier I operating permit as follows:

"8.7.2 No distillate fuel oil containing sulfur in excess of 0.5% by weight shall be burned in Boiler No. 4 and Boiler No. 5 in accordance with 40 CFR 60.42 (c) and IDAPA 58.01.01.728."

Compliance Assurance

Compliance with the fuel sulfur limit is addressed by PTC Condition 3.3 and the "Sulfur Content" requirements located in Section 2, the Facility-Wide section, of the Tier 1 permit. In addition, since this permit condition indicates that 40 CFR Part 60 Subpart Dc is applicable, the permittee must also comply with the "Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units" requirements located in Section 2 of the Tier I permit.

Existing Permit Condition – Fuel Throughput Limits [PTC No. 023-00001, 5/14/98]

"2.2 Fuel Throughput

"No more than 93,333 gallons per month (gal/mo) or 1,120,000 gallons per consecutive 12-month period (gal/yr) of fuel oil shall be burned in the boilers."

Applicable Requirement as it Appears in the Tier I Operating Permit

This PTC condition is included in the Tier I permit with no substantive changes.

Compliance Assurance

The appropriate monitoring and recordkeeping requirements to assure compliance with the fuel throughput limits are adequately addressed by PTC Condition 3.2. This condition was included in the Tier I permit as noted below.

Existing Permit Conditions – SO_2 Performance Test [PTC No. 023-00001, 5/14/98]

"3.1 SO_2 Performance Test

"Within 60 days after achieving maximum production rate, but not later than 180 days after initial start-up, the permittee shall conduct a performance test to measure SO_2 emissions from either boiler stack No. 4 or boiler stack No. 5 as required in 40 CFR 60.42c, and in accordance with the test methods and procedures in 40 CFR 60.44c and DEQ's "Procedures Manual for Air Pollution Control." Visible emissions shall be observed and recorded using the methods specified in DEQ's "Procedures Manual for Air Pollution Control". During the performance test, the fuel sulfur content and amount of fuel oil combusted shall be recorded and reported with the performance test results."

"4.1 Performance Test Protocol

"The permittee shall submit a test protocol for the performance test required in Section 3.1 of this permit to DEQ for approval at least 30 days prior to the test date."

"4.2 Performance Test Report

"The permittee shall submit a performance test report, including the required process data, for the test required in Section 3.1 of this permit, to DEQ within 30 days of the date on which the performance test is concluded."

Applicable Requirements as they Appear in the Tier I Operating Permit

These applicable requirements have been omitted from the Tier I operating permit per the July 10, 1995 White Paper for Streamlined Development of Part 70 Permit Applications. As certified in the application, the results of this initial source testing were reported to DEQ on July 26, 1993; therefore, this requirement for initial source testing is obsolete.

However, it is noted that although the initial NSPS performance test requirements under 40 CFR 60.42c and 60.44c have been completed, additional testing may be requested under 60.8(a) as follows:

"... and at such other times as may be required by the Administrator under section 114 of the Act, the owner or operator of such facility shall conduct performance test(s) and furnish the Administrator a written report of the results of such performance test(s)."

Future testing under 40 CFR 60.8 is adequately addressed in the Tier I permit as a Facility-Wide requirement, therefore, it is not included in the Tier I section titled "TAN 603-PBG-76-98, Fuel Oil-Fired Boilers No. 4 and No. 5." Refer instead to the "Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units" requirements located in Section 2 of the Tier I permit.

Existing Permit Condition – Fuel Throughput Monitoring [PTC No. 023-00001, 5/14/98]

"3.2 Fuel Throughput

"The permittee shall monitor and record the amount of fuel oil combusted in the boilers monthly and annually. The monthly and annual usage of fuel oil in the boilers shall be recorded in gallons. All data shall be kept on-site for the most recent two year period and shall be made available to DEQ representatives upon request."

Applicable Requirement as it Appears in the Tier I Operating Permit

This PTC condition is included in the Tier I permit with no substantive changes. Clarification was provided to show that the term "annual" means per consecutive 12-month period and that records shall be maintained for five instead of two years, consistent with EPA/DEQ requirements.

Existing Permit Condition – Fuel Sulfur Content Monitoring [PTC No. 023-00001, 5/14/98]

"3.3 Fuel Sulfur Content

The permittee shall sample and analyze the oil in the initial tank of oil to be fired in the boilers to demonstrate that the oil contains 0.5 weight percent of sulfur or less in accordance with Section 2.1 of this permit. Thereafter, the permittee shall require the vendor of the fuel oil to certify that each load has a 0.5 weight percent or less of sulfur in accordance with 40 CFR 60, Subpart Dc."

Applicable Requirement as it Appears in the Tier I Operating Permit

The sampling of the initial tank of oil is an obsolete requirement as the boilers that burn this fuel were last modified or installed in 1992. Therefore, the first sentence of the PTC condition was not included in the Tier I permit.

"8.7.5 The permittee shall require the vendor of the fuel oil to certify that each load received has a 0.5 weight percent or less of sulfur in accordance with 40 CFR 60, Subpart Dc. All data shall be obtained and maintained on site, for the most recent five-year period, and made available to DEQ representatives upon request."

Existing Permit Condition – Certification of Documents [PTC No. 023-00001, 5/14/98]

"4.3 Certification of Documents

All documents, including but not limited to, records, monitoring data, supporting information, testing reports, and compliance certifications submitted to DEQ shall contain a certification by a responsible official, in accordance with IDAPA 16.01.01.123. The certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete."

Applicable Requirement as it Appears in the Tier I Operating Permit

PTC Condition 4.3 is incorporated in the Tier I permit as a Facility-Wide requirement. Refer to the "Certification" requirement located in the General Provisions section of the Tier I permit.

17.3.4 PETROLEUM STORAGE TANKS [40 CFR PART 60 SUBPART Kb]

Existing Applicable Requirement – Standards of Performance for Volatile organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for which Construction, Reconstruction, or Modification Commenced after July 23, 1984 [40 CFR Part 60 Subpart Kb]

The applicability of Subpart Kb is given by 40 CFR 60.110b(a) and (b) as follows:

"60.110b(a) Except as provided in paragraph (b) of this section, the affected facility to which this subpart applies is each storage vessel with a capacity greater than or equal to 75 cubic meters (m^3) [19,813 gallons] that is used to store volatile organic liquids (VOL) for which construction, reconstruction, or modification is commenced after July 23, 1984."

"60.110b(b) This subpart does not apply to storage vessels with a capacity greater than or equal to 151 m^3 [39,890 gallons] storing a liquid with a maximum true vapor pressure less than 3.5 kilopascals (kPa) or with a capacity greater than or equal to 75 m 3 but less than 151 m 3 storing a liquid with a maximum true vapor pressure less than 15.0 kPa."

Tank numbers 98TAN00650 and 98TAN00491 are not affected units under this standard because the capacity of each tank is 15,000 gallons, which is less than 75 m^3. Tank numbers 98TAN00246 and 98TAN00247 are not affected units under this standard because of the following: the capacity of each tank is 48,000 gallons, which is greater than 151 m^3; and the vapor pressure of the no. 2 fuel oil stored is approximately 0.7 kPa, which is less than 3.5 kPa.

18. TEST REACTOR AREA

18.1 TRA Evaporation Pond

Current Permit To Construct

PTC No. 023-00001 was issued September 9, 2002. This PTC authorizes the operation of a warm wastewater evaporation pond that receives effluent from the warm waste treatment facilities (WWTF).

Source Description

The TRA Evaporation Pond (TRA-715) is a lined evaporation pond that receives discharge from the warm wastewater system. The construction consists of dual liners separated by one foot of sand. Perforated drains occupy the low spot between the liners to assist in detecting leaks in the primary liner. The emissions from the pond are uncontrolled.

The warm wastewater system consists two 50 ft^3 ion exchange beds in two waste treatment facilities (WWTFs), the process water building (TRA-605), the retention basin inlet sump (TRA-712), and the evaporation pond sump station (TRA-716). The mixed-ion exchange beds are designed to remove radioactive impurities from essentially pure demineralized water. The ion exchange media are bypassed in situations involving high conductivity water and/or water treatment where no appreciable reduction in emissions is present.

The main discharge path is from the outlet of the WWTF through TRA-716 to the evaporation pond. The other main discharge path is from the bypass demineralizer resin beds through the same facilities. The effluent water is monitored by the effluent radiation monitor (ERM) in the TRA-605 basement and sampled by the daily proportional sampling system in the TRA-636. Minor discharge paths include some buried piping from existing tanks and old reactor facilities that are routed directly to the TRA-712 and infrequent discharges routed directly to the evaporation pond from generating sources both inside and outside of the TRA site. In cases where water is diverted around either the ERM or the daily proportional sampling system, the wastewater is sampled to assure compliance with the emissions limits section of this permit.

A 20,000-gallon (approximate) floating roof storage tank will be used to accept discharge water when the radionuclide loading exceeds 100 times the normal level as described in this permit. The storage tank vent exhausts through the ventilation system to the TRA MTRS.

A 100,000-gal. floating roof storage tank will be used to accept discharge water when the radionuclide loading exceeds 1,000 times the normal level as described in this permit. The storage tank vent exhausts through the ventilation system to the TRA MTRS.

Regulatory Analysis

Existing Permit Condition – Section 1. [PTC No. 023-00001, 9/9/02]

Section 1. of the permit is the purpose and regulated sources sections of the permit which are not enforceable permit conditions and are not included in the Tier I operating permit.

Existing Permit Condition – Section 2.1 & 2.2 [PTC No. 023-00001, 9/9/02]

Sections 2.1 and 2.2 of the permit are the process description and emission control description. These sections are included in the Tier I operating permit as a summary description and are not enforceable permit conditions.

Existing Permit Condition – Section 2.3 and 2.10 [PTC No. 023-00001, 9/9/02]

Existing Permit Conditions 2.3 and 2.10 are the *National Emission Standards for Emissions of Radionuclides other than Radon from Department of Energy Facilities(40 CFR 61, Subpart H)* and are listed in Section 2.15, 2.15.1 and 2.15.2 of the Tier I operating permit

Existing Permit Condition – Section 2.4, 2.5, 2.6, 2.7, 2.8 and 2.9 [PTC No. 023-00001, 9/9/02]

Existing Permit Conditions 2.4, 2.5, 2.6, 2.7, 2.8 and 2.9 are state only permit conditions that specify operating and monitoring requirements. These are state only permit conditions because the permit conditions are for the control of toxic substances and are not included in the Tier I operating permit.

18.2 TRA – Diesel Powered Generators

Current Permit To Construct

PTC No. P-000534 was issued May 18, 2004. This PTC authorizes the operation three electrical generator units which are powered by large stationary diesel engineers.

Source Description

The Test Reactor Area (TRA) utilizes three electrical generator units (Units 674-M-6, 670-M-42 and 670-M-43) powered by large stationary diesel engines. The primary purpose of the TRA generators is to provide electrical power to the Advanced Test Reactor (ATR) and/or TRA during normal operations, off-normal operations, and emergency operation.

Regulatory Analysis

Existing Permit Condition – Section 1. [PTC No. P-000534, 5/18/04]

Section 1. of the permit is the purpose and regulated sources sections of the permit which are not enforceable permit conditions and are not included in the Tier I operating permit.

Existing Permit Condition – Section 2.1 & 2.2 [PTC No. P-000534, 5/18/04]

Sections 2.1 and 2.2 of the permit are the process description and emission control description. These sections are included in the Tier I operating permit as a summary description and are not enforceable permit conditions.

Existing Permit Condition – Section 2.3 [PTC No. P-000534, 5/18/04]

Existing Permit Condition 2.3 is a combined NO_x annual emission limit for the three generators. Tier I operating permit Section 9.1.1 is an exact quote of the underlying applicable requirement.

Existing Permit Condition – Section 2.4 [PTC No. P-000534, 5/18/04]

Existing Permit Condition 2.4 is the opacity limitation of IDAPA 58.01.01.625. This permit condition is included in the Tier I operating permit at Section 2.5.

Existing Permit Condition – Section 2.5 through 2.10 [PTC No. P-000534, 5/18/04]

Existing Permit Conditions 2.5 through 2.10 are included in the Tier I Operating permit at 9.1.2 through 9.1.6 and are exact quotes of the underlying applicable requirements.

Existing Permit Condition – Section 2.11and 2.12 [PTC No. P-000534, 5/18/04]

Existing Permit Condition 2.11 encourages the permittee to submit a protocol 30 days prior to conducting a performance test. Existing Permit Condition 2.12 requires that a report of the results of the performance test be submitted to DEQ within 30 days of conducting the performance test. These permit conditions are included in the Tier I operating permit at Section 2.12.

19. RADIOACTIVE WASTE MANAGEMENT COMPLEX

19.1 Current Permit To Construct

There are no Permits to Construct issued specifically to the RWMC.
Refer to the AMWTP and TSA-RE areas for permitting information

19.2 Source Description

The RWMC disposes of LLW and temporarily stored mixed TRU waste. Disposal of solid radioactive waste began at the RWMC in 1952. In 1953, the AEC decided that solid radioactive waste from the Rocky Flats Plant near Golden, Colorado would be sent to the RWMC. Therefore, starting in 1954, Rocky Flats wastes containing TRU nuclides (principally plutonium) were buried in pits and trenches at the RWMC.

In 1960, the INEEL was designated as one of two national interim radioactive waste burial grounds. Although waste was received from many sources, the majority of TRU waste was from Rocky Flats. The national burial ground designation was discontinued in 1963 when commercial disposal facilities for radioactive waste became available.

In 1970, the AEC directed that all waste contaminated with TRU isotopes be segregated from other types of radioactive waste. This was because of the radiotoxicity and long half-lives of the TRU material. The TRU waste was to be stored in a readily retrievable manner during a 20-year interim storage period. When a federal repository became available, this waste was to be retrieved and sent there for long-term isolation. The DOE adopted an aboveground storage method at the TSA of the RWMC to meet the interim storage requirement. Although newly generated TRU mixed waste may still be accepted for storage, very little has been accepted since 1990; LLW continues to be accepted for permanent disposal.

REGULATORY ANALYSIS

19.3.1 Radioactive Waste Management Complex

The only applicable requirements associated with the RWMC facility in the Tier I permit are the facility-wide requirements. RWMC has no active air quality permits. Other operations within the boundaries of RWMC that are regulated by existing permits are the AMWTP and the TSA-RE. Please refer to the AMWTP section of this memo for more information.

20. ADVANCED MIXED WASTE TREATMENT PROJECT

20.1 Current Permits To Construct

June 7, 2002	PTC No. 023-00001 issued for the AMWTP
January 27, 2003	PTC No. 023-00001 issued for the TSA-RE.
December 19, 2003	PTC No. P-030542 issued for the TSA-RE standby generator.

20.2 Source Description

The AMWTP is underway in response to the 1995 Settlement Agreement between the state of Idaho and the DOE. The settlement agreement directed DOE to ship the currently estimated 65,000 m^3 of TRU waste now located at INEEL to the WIPP or other such facility designated by DOE, by a target date of December 31, 2015, but no later than December 31, 2018. Much of this waste requires treatment before it will be accepted for disposal at the WIPP in New Mexico. DOE contracted with BNFL, Inc. to construct the AMWTP to treat the waste so it will be accepted at WIPP.

The AMWTP will treat mixed waste, TRU waste and alpha-emitting mixed low-level waste. The project includes:

retrieving stored waste;

- characterizing the waste for storage, treatment, or disposal;
- storing the waste in preparation for treatment or pretreatment (as required);
- pretreating and/or treating the waste in the AMWTF (if necessary); and
- certifying the waste for shipment to WIPP or another waste management unit.

The overall AMWTP includes the AMWTF and the TSA-RE. The AMWTF is specific to the treatment building, along with other buildings and associated activities. The AMWTF is located at the RWMC on the southern portion of the 56-acre TSA. The waste that requires retrieval is located in the TSA-RE just west of the AMWTF. The TSA-RE encloses asphalt pads which support primarily earthen-covered stacks of retrievably mixed waste.

20.3 Regulatory Analysis

20.3.1 Transuranic Storage Area Retrieval Enclosure [PTC No. 023-00001, 1/27/03]

The TSA-RE air emissions are regulated by two PTC's. The first PTC is PTC No. 023-00001, issued on January 27, 2003. Each applicable PTC condition is listed below followed by how the condition is included in the Tier I permit. As applicable, the compliance assurance for each condition is also described. Some permit conditions are based on state-only requirements and are listed in the Tier I permit as "state only".

Existing PTC Condition - Radionuclide Dose Impact Limit [PTC No. 023-00001, 1/27/03]

"1.1 Radionuclide Dose Impact

The Transuranic Storage Area - Retrieval Enclosure (TSA-RE) shall operate in accordance with the requirements of the EPA, NESHAPs, and 40 CFR Part 61, Subparts A and H. Radionuclide emissions from the TSA-RE shall not by themselves, or in combination with radionuclide emissions from all other facilities located at the Idaho National Engineering and Environmental Laboratory (INEEL) site, cause any member of the public at any off-site point where there is a residence, school, business, or office to receive an effective dose equivalent to greater than 10 millirems per year (mrem/yr)."

Applicable Requirement as it Appears in the Tier I Operating Permit

PTC Condition 1.1 is incorporated in the Tier I permit as a Facility-Wide requirement. Refer to the "National Emission Standards for Emissions of Radionuclides other than Radon from Department of Energy Facilities" requirement located in Section 2.

Existing Permit Condition - Criteria Pollutant Emissions Limits [PTC No. 023-00001, 1/27/03]

"1.2 Criteria Pollutant Emission Limits

The permittee shall limit nitrogen oxides (NO_x) emissions from the diesel powered soil vacuum and from mobile equipment operating within the TSA-RE to levels not exceeding the limits established in Table A.1 in Appendix A. The NO_x limit applies to equipment used to move soil and retrieve waste within the TSA-RE. The NO_x limit does not apply to dump trucks, tugs, yard cranes, and other equipment that enters the TSA-RE to move soil, retrieved waste, or other materials from the TSA-RE to another location outside of the TSA-RE."

"APPENDIX A

Table A.1 EMISSIONS LIMITS

BNFL Inc., Idaho Falls Transuranic Retrieval Enclosure - Storage Area Emission Limits[a] – Hourly (lb/hr) and Annual[b] (T/yr)	
Source Description	**Nitrogen Oxides** **T/yr**
Aggregate emissions from the diesel powered soil vacuum and from mobile equipment that operates within the TSA-RE (in accordance with Permit Condition 1.2)	21.4
Propane heater	1.0

[a] As determined by a pollutant-specific EPA reference method, a DEQ-approved alternative, or as determined by DEQ's emissions estimation methods used in this permit analysis.

[b] As determined by multiplying the actual or allowable (if actual is not available) pound-per-hour emission rate by the allowable hours per year that the process(es) may operate, or by actual annual production rates."

Applicable Requirement as it Appears in the Tier I Operating Permit

PTC Condition 1.2 is incorporated in the Tier I permit as Condition 11.1. Clarifications made to this PTC condition include removing the reference to "Appendix A", and adding a footnote that clarifies the NO_x emission limit is per any consecutive 12-month period. Tier I Permit Condition 11.1 appears as follows:

"11.1 The permittee shall limit NO_x emissions from the diesel powered soil vacuum and from mobile equipment operating within the TSA-RE to levels not exceeding the limits established in Table 11.2. The NO_x limit applies to equipment used to move soil and retrieve waste within the TSA-RE. The NO_x limit does not apply to dump trucks, tugs, yard cranes, and other equipment that enters the TSA-RE to move soil, retrieve waste, or other materials from the TSA-RE to another location outside of the TSA-RE.

Table 11.2 NO_x EMISSIONS LIMITS

BNFL Inc., Idaho Falls Transuranic Retrieval Enclosure - Storage Area Emission Limits[a] – Hourly (lb/hr) and Annual[b] (T/yr)	
Source Description	**Nitrogen Oxides**
	T/yr[c]
Aggregate emissions from the diesel powered soil vacuum and from mobile equipment that operates within the TSA-RE (in accordance with Permit Condition 11.1)	21.4
Propane heater	1.0

[a] As determined by a pollutant-specific EPA reference method, a DEQ-approved alternative, or as determined by DEQ's emissions estimation methods used in this permit analysis.
[b] As determined by multiplying the actual or allowable (if actual is not available) pound-per-hour emission rate by the allowable hours per year that the process(es) may operate, or by actual annual production rates.
[c] Tons per year based on any consecutive 12-month period."

Compliance Assurance

The appropriate monitoring and recordkeeping requirements to assure compliance with the NOx emission rate limits are adequately addressed by the PTC. These conditions appear in the Tier I permit as Conditions 11.2, 11.3, 11.4, 11.5, and 11.6.

Existing Permit Condition - Fuel-Burning Equipment Standard [PTC No. 023-00001, 1/27/03]

"1.3 Fuel-burning Equipment Standard

The permittee shall not discharge particulate matter (PM) to the atmosphere in excess of 0.050 grains per dry standard cubic foot (gr/dscf) corrected to 3% oxygen from any equipment burning liquid fuel. The permittee shall not discharge PM to the atmosphere from any equipment burning gaseous fuel in excess of 0.015 gr/dscf corrected to 3% oxygen."

Applicable Requirement as it Appears in the Tier I Operating Permit

PTC Condition 1.3 is incorporated in the Tier I permit as a Facility-Wide requirement. Refer to the "Fuel-burning Equipment" requirement located in Section 2.

Existing Permit Condition - Opacity Limit [PTC No. 023-00001, 1/27/03]

"1.4 Opacity Limit

Emissions from any stack, vent, or functionally equivalent opening associated with the TSA-RE, shall not exceed 20% opacity for a period or periods aggregating more than three minutes in any 60-minute period as required by IDAPA 58.01.01.625. The permittee shall determine opacity by the procedures contained in IDAPA 58.01.01.625."

Applicable Requirement as it Appears in the Tier I Operating Permit

PTC Condition 1.4 is incorporated in the Tier I permit as a Facility-Wide requirement. Refer to the "Visible Emissions" requirement located in Section 2.

Existing Permit Condition - Fuel Consumption Limitations [PTC No. 023-00001, 1/27/03]

"2.2 Fuel Consumption Limitations

2.2.1 The permittee shall combust propane exclusively in the 2.5 million British thermal units per hour (MMBtu/hr) indirect-fired heater at the facility.

2.2.2 The amount of propane combusted in the indirect-fired heater shall not exceed 5.44 million cubic feet in any consecutive 12-month period."

Applicable Requirement as it Appears in the Tier I Operating Permit

PTC Condition 2.2.1 is incorporated in the Tier I permit as Condition 11.2. PTC Condition 2.2.2 is incorporated in the Tier I permit as Condition 11.3.

Compliance Assurance

The appropriate monitoring and recordkeeping requirements to assure compliance with the propane combustion requirements are adequately addressed by the PTC. These conditions appear in the Tier I permit as Condition 11.5.

Existing Permit Condition - Sulfur Content - Diesel Fuel [PTC No. 023-00001, 1/27/03]

"2.3 Sulfur Content – Diesel Fuel

The permittee shall not sell, distribute, or use any No. 2 distillate fuel oil containing more than 0.5% sulfur by weight."

Applicable Requirement as it Appears in the Tier I Operating Permit

PTC Condition 2.3 is incorporated in the Tier I permit as a Facility-Wide requirement. Refer to the "Sulfur Content" requirement located in Section 2.

Existing Permit Condition - Equipment Hours of Operation [PTC No. 023-00001, 1/27/03]

"3.2 Equipment Hours of Operation

The permittee shall monitor and record on a monthly basis the hours of operation for each piece of equipment that operates inside the TSA-RE. The permittee shall also monitor and record the hours of operation on a monthly per consecutive 12-month period for the 360-horsepower soil vacuum. These records shall be kept onsite for the most recent five-year period and shall be made available to DEQ representatives upon request."

Applicable Requirement as it Appears in the Tier I Operating Permit

PTC Condition 3.2 is incorporated in the Tier I permit as Condition 11.4.

Existing Permit Condition - Fuel-burning Monitoring [PTC No. 023-00001, 1/27/03]

"3.3 Fuel-burning Monitoring

The permittee shall monitor and record the total fuel usage, in cubic feet per consecutive 12-month period, of the indirect-fired heater at the TSA-RE facility on a monthly basis. This information shall be kept onsite for the most recent five-year period and shall be made available to DEQ representatives upon request."

Applicable Requirement as it Appears in the Tier I Operating Permit

PTC Condition 3.3 is incorporated in the Tier I permit as Condition 11.5.

Existing Permit Condition - Sulfur Content of Fuels [PTC No. 023-00001, 1/27/03]

"3.4 Sulfur Content of Fuels

The permittee shall monitor and record the sulfur content of the No. 2 distillate oil combusted at the facility. This information shall be kept onsite for the most recent five-year period and shall be made available to DEQ representatives upon request."

Applicable Requirement as it Appears in the Tier I Operating Permit

PTC Condition 3.4 is incorporated in the Tier I permit as a Facility-Wide requirement. Refer to the "Sulfur Content" monitoring requirement located in Section 2.

Existing Permit Condition - Radionuclide Monitoring [PTC No. 023-00001, 1/27/03]

"3.5 Radionuclide Monitoring

In accordance with 40 CFR 61.93(b)(4)(i), the permittee shall perform periodic confirmatory measurements to verify low emissions."

Applicable Requirement as it Appears in the Tier I Operating Permit

PTC Condition 3.5 is incorporated in the Tier I permit as a Facility-Wide requirement. Refer to the "National Emission Standards for Emissions of Radionuclides other than Radon from Department of Energy Facilities" requirement located in Section 2.

Existing Permit Condition – Emissions Calculations [PTC No. 023-00001, 1/27/03]

"3.7 Emissions Calculations

The permittee shall calculate NO_x emissions from the TSA-RE per consecutive 12-month period in the following manner.

3.7.1 On a monthly basis, for each piece of equipment operated within the TSA-RE as discussed in Permit Condition 1.2, the permittee shall multiply the hours of operation recorded in accordance with Permit Condition 3.2 by the horsepower rating for the equipment.

3.7.2 The permittee shall multiply the total from Permit Condition 3.7.1 by the appropriate emission factor. The emissions factor to be used is 0.031 pounds NO_x per horsepower-hour or a DEQ approved alternative.

3.7.3 The permittee shall sum the NO_x emissions from the previous consecutive 12-months.

3.7.4 This information shall be kept onsite for the most recent five-year period and shall be made available to DEQ representatives upon request."

Applicable Requirement as it Appears in the Tier I Operating Permit

PTC Conditions 3.7 and 3.7.1 through 3.7.4 are incorporated in the Tier I permit as Conditions 11.6 and 11.6.1 through 11.6.4 respectively.

Existing Permit Condition - Reporting Permit Deviations [PTC No. 023-00001, 1/27/03]

"4.2 Reporting Permit Deviations

The permittee shall submit a report to the DEQ within 15 days of discovering a deviation of any term or condition of this permit. The report shall contain the date(s), duration and description of the deviations(s), and the procedures taken to remedy the cause of the deviations(s)."

Applicable Requirement as it Appears in the Tier I Operating Permit

PTC Condition 4.2 is incorporated in the Tier I permit as a General Provision requirement. Refer to Section 12 of the permit, General Provision 25 for "Reporting Deviations and Excess Emissions.

Existing Permit Condition - NESHAPs Annual Report [PTC No. 023-00001, 1/27/03]

"4.3 NESHAPs Annual Report

The permittee shall submit a copy of the annual report required by 40 CFR 61.94 to EPA and DEQ no later than June 30 of each calendar year."

Applicable Requirement as it Appears in the Tier I Operating Permit

PTC Condition 4.3 is incorporated in the Tier I permit as a Facility-Wide requirement. Refer to the "National Emission Standards for Emissions of Radionuclides other than Radon from Department of Energy Facilities" requirement located in Section 2.

Existing Permit Condition - Certification of Documents [PTC No. 023-00001, 1/27/03]

"4.4 Certification of Documents

All documents, including, but not limited to, application forms for permits to construct, records, monitoring data, supporting information, requests for confidential treatment, testing reports, and compliance certifications submitted to the DEQ shall contain a certification by a responsible official in accordance with IDAPA 58.01.01.123. The certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the documents(s) are true, accurate, and complete.

All DEQ reporting required by this permit shall be sent to:

Air Quality Permit Compliance
Department of Environmental Quality
Idaho Falls Regional Office
900 N. Skyline, Suite B
Idaho Falls, ID 83402
Tel. (208) 528-2650 Fax: (208) 528-2695"

Applicable Requirement as it Appears in the Tier I Operating Permit

PTC Condition 4.4 is incorporated in the Tier I permit as a General Provision requirement. Refer to Section 12, General Provision 17 for "Certification" requirements.

Existing Permit Conditions [PTC No. 023-00001, 1/27/03]

Existing Permit Conditions 2.1, 2.5 3.1, 3.6, and 4.1 are state only permit conditions because they relate to assuring compliance with the state's toxic substance regulation and are not included in the Tier I operating permit.

20.3.2 Transuranic Storage Area Retrieval Enclosure Standby Generator [PTC No. P-030542, 12/19/03]

A second PTC No. P-030542, issued January 27, 2003 for the TSA-RE, regulates a standby generator. Each applicable PTC condition is listed below followed by how the condition is expressed in the Tier I permit. As applicable, the compliance assurance for each condition is also described. Some permit conditions are based on state-only requirements and are not included in the Tier I operating permit.

Existing Permit Condition - Opacity Limit [PTC No. P-030542, 12/19/03]

"2.1 Opacity Limit

Emissions from the TSA-RE standby generator shall not exceed 20% opacity for a period or periods aggregating more than three minutes in any 60-minute period as required by IDAPA 58.01.01.625. Opacity shall be determined by the procedures contained in IDAPA 58.01.01.625."

Applicable Requirement as it Appears in the Tier I Operating Permit

PTC Condition 2.1 is incorporated in the Tier I permit as a Facility-Wide requirement. Refer to the "Visible Emissions" requirement located in Section 2.

Existing Permit Condition - Hours of Operation Limit [PTC No. P-030542, 12/19/03]

"2.2 Hours of Operation Limit

The maximum annual hours of operation of the standby generator shall not exceed 500 hours per any consecutive 12-month period."

Applicable Requirement as it Appears in the Tier I Operating Permit

PTC Condition 2.2 is incorporated in the Tier I permit as Condition 11.7.

Compliance Assurance

The appropriate monitoring and recordkeeping requirement to assure compliance with the generator hours of operation limit is adequately addressed by the PTC. This condition appears in the Tier I permit as Conditions 11.9.

Existing Permit Condition – Fuel Consumption Limit [PTC No. P-030542, 12/19/03]

"2.3 Fuel Consumption Limit

The maximum hourly fuel consumption shall not exceed 40 gallons per hour."

Applicable Requirement as it Appears in the Tier I Operating Permit

PTC Condition 2.3 is incorporated in the Tier I permit as Condition 11.8. Clarifications made to the PTC condition include referencing the standby generator. Tier I permit Condition 11.8 appears as follows:

"11.8 The maximum hourly fuel consumption of the standby generator shall not exceed 40 gallons per hour."

Compliance Assurance

The appropriate monitoring and recordkeeping to assure compliance with the gallons per hour consumption rate was not addressed by the PTC. In accordance with IDAPA 58.01.01.322.06, Tier I Permit Condition 11.10 was developed to assure compliance with the PTC condition for the fuel usage rate limit of the generator. Tier I permit Condition 11.10 was developed to read as follows:

"11.10 The permittee shall maintain documentation which demonstrates the standby generator does not exceed the 40 gallon per hour combustion rate limit. Documentation may consist of manufacture performance specifications."

Existing Permit Condition - Hours of Operation Monitoring [PTC No. P-030542, 12/19/03]

"2.4 Hours of Operation Monitoring

Each month, the permittee shall monitor and record the hours of operation of the standby generator for that month and for the most recent 12-month period. The most recent two years compilation of data shall be kept on site and shall be made available to DEQ representative upon request."

Applicable Requirement as it Appears in the Tier I Operating Permit

PTC Condition 2.4 is incorporated in the Tier I permit as Condition 11.9. A clarification was made to the PTC condition by changing the two years record retention requirement to five years to be consistent with the Tier I regulations. Tier I permit Condition 11.9 appears as follows:

"11.9 Each month, the permittee shall monitor and record the hours of operation of the standby generator for that month and for the most recent 12-month period. The most recent five years compilation of data shall be kept on site and shall be made available to DEQ representative upon request."

Existing Permit Condition – Certification of Documents [PTC No. P-030542, 12/19/03]

"2.5 Certification of Documents

All documents submitted to DEQ, including but not limited to, records, monitoring data, supporting information, requests for confidential treatment, testing reports, or compliance certifications, shall contain a certification by a responsible official. The certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document(s) are true, accurate, and complete."

Applicable Requirement as it Appears in the Tier I Operating Permit

PTC Condition 2.5 is incorporated in the Tier I permit as a Facility-Wide requirement. Refer to the "Reports and Certifications" requirement located in Section 2.

20.3.3 ADVANCED MIXED WASTE TREATMENT FACILITY

The AMWTF air emissions are regulated by PTC No. 023-00001, issued on June 7, 2002. Each applicable PTC condition is listed below followed by how the condition is included in the Tier I permit. As applicable, the compliance assurance for each condition is also described. Some permit conditions are based on state-only requirements and are not included in the Tier I operating permit.

Existing Permit Condition - Radionuclide Dose Impact Limit [PTC No. 023-00001, 6/7/02]

"1.1 Radionuclide Dose Impact

The Advanced Mixed Waste Treatment Facility (AMWTF) shall operate in accordance with the requirements of the EPA, 40 CFR Part 61, Subparts A and H. Radionuclide emissions from the AMWTF shall not by themselves, or in combination with radionuclide emissions from all other facilities located at the Idaho National Engineering and Environmental Laboratory (INEEL) site, cause any member of the public at any off-site point where there is a residence, school, business, or office to receive an effective dose equivalent to greater than 10 mrem/yr."

Applicable Requirement as it Appears in the Tier I Operating Permit

PTC Condition 1.1 is incorporated in the Tier I permit as a Facility-Wide requirement. Refer to the *"National Emission Standards for Emissions of Radionuclides other than Radon from Department of Energy Facilities"* requirement located located in Section 2.

Existing Permit Condition - Criteria Pollutant Emissions Limits [PTC No. 023-00001, 6/7/02]

"1.2 Criteria Pollutant Emission Limits

Annual emissions of NO_x from the three boilers at the AMWTF shall not exceed the limit listed in Appendix A."

"APPENDIX A

Table A.1 EMISSIONS LIMITS

BNFL Inc. Advanced Mixed Waste Treatment Facility Emission Limits[a]	
Source Description	**NO_x (T/yr)**
Aggregate emissions from three boilers.	3.1

[a] As determined by a pollutant-specific EPA reference method, a DEQ-approved alternative, or as determined by DEQ's emissions estimation methods used in this permit analysis."

Applicable Requirement as it Appears in the Tier I Operating Permit

PTC Condition 1.2 is incorporated in the Tier I permit as Condition 11.11. Clarifications made to this PTC condition include removing the reference to "Appendix A", and adding a footnote that clarifies the NO_x emission limit is per any consecutive 12-month period. Tier I Permit Condition 11.11 appears as follows:

"11.11 Annual emissions of NO_x from the three boilers at the AMWTF shall not exceed the limit listed in Table 11.3.

Table 11.3 EMISSIONS LIMITS

BNFL Inc. Advanced Mixed Waste Treatment Facility Emissions Limits[a]	
Source Description	**NO_x[b] (T/yr)**
Aggregate emissions from three boilers.	3.1

[a] As determined by a pollutant-specific EPA reference method, a DEQ-approved alternative, or as determined by DEQ's emissions estimation methods used in this permit analysis.

[b] Tons per year based on any consecutive 12-month period."

Compliance Assurance

The appropriate monitoring and recordkeeping requirements to assure compliance with the NOx emission rate limits are adequately addressed by the PTC. These conditions appear in the Tier I permit as Conditions 11.12, 11.13, and 11.14.

Existing Permit Condition - Fuel-Burning Equipment Standard [PTC No. 023-00001, 6/7/02]

"1.3 Fuel-burning Equipment Standard

The permittee shall not discharge to the atmosphere from any fuel-burning equipment PM in excess of 0.050 gr/dscf corrected to 3% oxygen."

Applicable Requirement as it Appears in the Tier I Operating Permit

PTC Condition 1.3 is incorporated in the Tier I permit as a Facility-Wide requirement. Refer to the "Fuel-burning Equipment" requirement located in Section 2.

Existing Permit Condition - Opacity Limit [PTC No. 023-00001, 6/7/02]

"1.4 Opacity Limit

Emissions from any stack, vent, or functionally equivalent opening associated with the AMWTF, shall not exceed 20% opacity for a period or periods aggregating more than three minutes in any 60-minute period as required by IDAPA 58.01.01.625, Rules for the Control of Air Pollution in Idaho. Opacity shall be determined by the procedures contained in IDAPA 58.01.01.625."

Applicable Requirement as it Appears in the Tier I Operating Permit

PTC Condition 1.4 is incorporated in the Tier I permit as a Facility-Wide requirement. Refer to the "Visible Emissions" requirement located in Section 2.

Existing Permit Condition - Fuel Consumption Limitations [PTC No. 023-00001, 6/7/02]

"2.3 Fuel Consumption Limitations

The permittee shall combust propane exclusively in the three 12.55 MMBtu/hr boilers and one 2.0 MMBtu/hr potable water heater at the facility.

The aggregate fuel consumption for the three boilers at the AMWTF shall not exceed 322,084 gallons per consecutive 12-month period."

Applicable Requirement as it Appears in the Tier I Operating Permit

PTC Condition 2.3 contains two applicable requirements that are incorporated into the Tier I permit as Conditions 11.7 and 11.8.

Compliance Assurance

The appropriate monitoring and recordkeeping requirements to assure compliance with the fuel combustion requirements are adequately addressed by the PTC. These conditions appear in the Tier I permit as Condition 11.14.

Existing Permit Condition - Radionuclide Monitoring [PTC No. 023-00001, 6/7/02]

"3.1 Radionuclide Monitoring

In accordance with 40 CFR 61.93, the permittee shall determine radionuclide emissions and calculate effective dose equivalent values to members of the public using EPA-approved sampling procedures."

Applicable Requirement as it Appears in the Tier I Operating Permit

PTC Condition 3.1 is incorporated in the Tier I permit as a Facility-Wide requirement. Refer to the "National Emission Standards for Emissions of Radionuclides other than Radon from Department of Energy Facilities" requirement located in Section 2.

Existing Permit Condition - Fuel-Burning Monitoring [PTC No. 023-00001, 6/7/02]

"3.3 Fuel Burning Monitoring

The permittee shall maintain documentation of the type of fuel burned in each boiler and the potable water heater at the AMWTF facility. The permittee shall also monitor the aggregate amount of fuel burned in the three boilers per any consecutive 12-month period. A compilation of the most recent two years of records shall be kept onsite and shall be made available to DEQ representatives upon request."

Applicable Requirement as it Appears in the Tier I Operating Permit

PTC Condition 3.3 is incorporated in the Tier I permit as Condition 11.14. A clarification was made to the PTC condition by changing the two years record retention requirement to five years which is consistent with the Tier I regulations. Tier I Permit Condition 11.14 appears as follows:

"11.14 The permittee shall maintain documentation of the type of fuel burned in each boiler and the potable water heater at the AMWTF facility. The permittee shall also monitor the aggregate amount of fuel burned in the three boilers per any consecutive 12-month period. A compilation of the most recent five years of records shall be kept onsite and shall be made available to DEQ representatives upon request."

Existing Permit Condition - Reporting Permit Deviations [PTC No. 023-00001, 6/7/02]

"4.2 Reporting Permit Deviations

The permittee shall submit a report to DEQ within 15 days of discovering a deviation of any term or condition of this permit. The report shall contain the date(s), duration and description of the deviations(s), and the procedures taken to remedy the cause of the deviations(s)."

Applicable Requirement as it Appears in the Tier I Operating Permit

PTC Condition 4.2 is incorporated in the Tier I permit as a General Provision requirement. Refer to Section 12 of the permit, General Provision 25 for "Reporting Deviations and Excess Emissions.

Existing Permit Condition - NESHAP Annual Report [PTC No. 023-00001, 6/7/02]

"4.3 NESHAP Annual Report

The permittee shall submit a copy of the annual report required by 40 CFR 61.94 to the EPA and DEQ no later than June 30 of each calendar year."

Applicable Requirement as it Appears in the Tier I Operating Permit

PTC Condition 4.3 is incorporated in the Tier I permit as a Facility-Wide requirement. Refer to the "National Emission Standards for Emissions of Radionuclides other than Radon from Department of Energy Facilities" requirement located in Section 2.

Existing Permit Condition - Certification of Documents [PTC No. 023-00001, 6/7/02]

"4.4 Certification of Documents

All documents, including, but not limited to, application forms for permits to construct, records, monitoring data, supporting information, requests for confidential treatment, testing reports, and compliance certifications submitted to DEQ shall contain a certification by a responsible official in accordance with IDAPA 58.01.01.123. The certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the documents(s) are true, accurate, and complete.

All DEQ reporting required by this permit shall be sent to:

Air Quality Permit Compliance
Department of Environmental Quality
Idaho Falls Regional Office
900 N. Skyline, Suite B
Idaho Falls, ID 83402"

Applicable Requirement as it Appears in the Tier I Operating Permit

PTC Condition 4.4 is incorporated in the Tier I permit as a General Provision requirement. Refer to Section 12, General Provision 17 for "Certification" requirements.

state-only Permit Conditions

Existing Permit Conditions - Facility Waste Throughput Limit [PTC No. 023-00001, 6/7/02]

Existing PTC Conditions 2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 3.2, 3.4, and 4.1 are not applicable requirements by definition (found in IDAPA 58.01.01.008.03.b) because they relate to assuring compliance with the state's toxic substances regulation (IDAPA 58.01.01.161). Non-applicable requirements are not included in the Tier I operating permit.

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APPENDIX A

Grain Loading Calculations

BOILER GRAIN LOADING CALCUALTIONS
FOR
1, # 2, and # 4 FUEL OIL, and JP-4 OR JP 8

Emission factors from AP-42, Section 1.3

2 Fuel Oil: 2lb PM/10^3gal - all boiler sizes

4 Fuel Oil: 7 lb PM/10^3gal - all boiler sizes

Assuming Fuel Oil No. 1 JP-4 and JP-8 emissions are equal to or less than PM emissions from combusting # 2 fuel oil. Aviation fuel (JP-4 and JP-8) is from a higher distillation level than diesel fuel and thus it can be inferred that particulate matter emissions will result from its combustion.

Discussion on Boilers

Based on AP-42 PM emissions in pounds per hour (lb/hr) are directly proportional to fuel burned, fuel type and independent of the emission unit.

Using the attached combustion evaluations, exhaust flow in dscfm @ 3% O_2 is directly proportional to fuel burned, and independent of emission unit.

For example, if fuel use increases by a factor of 10, then emissions and exhaust flow increase by a factor of 10. Therefore, it is necessary to demonstrate compliance with grain loading emissions limit for only one fuel burning rate for each fuel type.

 # 2 Fuel Oil (No. 1, JP-4 or JP-8)

$$2\frac{lbPM}{10^3 gal}\left(100\frac{gal}{hr}\right)\left(\frac{hr}{60\,\text{min}}\right)\left(\frac{7000gr}{lb}\right)=23.3\frac{gr}{\text{min}}$$

From Attached combustion evaluation at 100 gal/hr:

Q = 2981.6 acfm @ 3% O_2

23.3 gal/min / 2981.6 ft 3/min = 0.0078 gr/dscf@3% O_2

 # 4 Fuel Oil

$$7\frac{lbPM}{10^3 gal}\left(100\frac{gal}{hr}\right)\left(\frac{hr}{60\,\text{min}}\right)\left(\frac{7000gr}{lb}\right)=81.66\frac{gr}{\text{min}}$$

From Attached combustion evaluation at 100 gal/hr:

Q = 3144.4 @ 100 gal/hr dscfm@ 3% O_2;

$$81.66\frac{gr}{\text{min}} \Big/ 3144.4\frac{ft^3}{\text{min}} = 0.0026 acfm\ @\ 3\%O_2$$

APPENDIX B

Response to Public Comment

Response to Public Comments
Submitted During the Public Comment Period
for the INEEL. Tier I Operating Permit
AIRS Facility No. 023-00001, No. 011-00022

Response to Comments

A public comment period was held from August 19, 2004 through September 29, 2004 to let any interested party review and comment on the draft Tier I operating permit prepared by the Department for the INEEL. In accordance with IDAPA 58.01.01.364 (*Rules for the Control of Air Pollution in Idaho*), *"all Tier I operating permit proceedings shall provide for public notice and public comment, including offering an opportunity for a hearing, on a draft permit or on a draft denial."* Copies of the draft permit and technical memorandum were made for review at DEQ's State and Idaho Falls Regional offices, the Idaho Falls Public Library, the Lost Rivers Community Library in Arco, and on DEQ's Web site in PDF format. A hearing was held on September 28, 2004. The state Montana is an affected state, and as such, DEQ also provided a copy of the public comment package for their review and comment. Affected states are defined in IDAPA 58.01.01.008.01 as: *"All states whose air quality may be affected by the emissions of the Tier I source and that are contiguous to Idaho or that are within 50 miles of the Tier I source."* As a courtesy the draft permit was also made available to the State of Wyoming.

The only party that provided comments during the public comment period or hearing was INEEL. This document provides DEQ's response to the comments submitted. Comments are given then DEQ's response immediately follows. In some instances the comments are paraphrased.

INEEL Tier I:

Comment # 1

Cover Page/General The INEEL is requesting that the DEQ remove all terms and conditions related to the emissions of toxic air pollutants that are subject to the state-only requirements of IDAPA 58.01.01.210.

Response # 1

All state-state only permit conditions have been removed from the Tier I operating permit as requested.

Comment # 2

General Comment There is no regulatory basis for a condition when the condition is only enforceable through a PTC and not referenced in IDAPA 58.01.01. The DEQ should either delete these conditions and revise the PTCs to eliminate the conditions, or demonstrate that there is a need for these conditions to prevent adverse impacts to public health or the environment. Limits with no underlying regulation on emissions (lb/hr, tons per year (tpy), etc.) and on production (throughput or input) are found throughout this permit. In accordance with IDAPA 58.01.01.008.03, the definition of applicable requirements does not include the requirements contained in many of INEEL's current PTCs.

(Also corresponds to comments: 24,25, 26, 33, 36, 39, 40, 41, 42, 45, 49, 58, 59, 62, 70, 75, 77, 93, 96, 97)

Response # 2

The Tier I operating permit does not contain any new limits on emissions nor does it contain any limits on emissions that do not originate from an underlying applicable requirement. In some cases the Tier I operating permit clarifies the averaging period of the emissions limit of the under lying applicable requirement, but there are no new emission limits.

Where underlying applicable requirements on emissions (lb/hr, tpy, etc.) occur in existing permits without sufficient operational requirements and limitations to assure compliance they were added (IDAPA 58.01.01.322.01). To be specific permit conditions 3.1.2, 6.2 and 7.2 where added. These conditions do not allow combustion of No. 5 or No. 6 fuel oil in boilers. This is because no demonstration was provided showing compliance with particulate matter grain loading standards (IDAPA 58.01.01.675) while burning these fuels, and DEQ calculations show that combustion of these fuels without restrictions may cause an exceedance of the particulate matter grain loading standard. There are no other new operational requirements or limitations in the Tier I operating permit. However, the permit does contain several new monitoring requirements in accordance with IDAPA 58.01.01.322.06.

Comment # 3

General Comment When the original regulatory basis for a PTC no longer exists (due to DEQ rule/exemption changes), and the only reason for the PTC is the state's "once permitted, always permitted" policy, then such PTC requirements no longer have a regulatory basis and should be deleted from this operating permit.

(Also corresponds to comment 9)

Response # 3

There have not been any rule or exemption changes that supersede or make any existing permit condition obsolete.

Comment # 4

General Comment Many conditions just state that the source must comply with the terms and conditions of the PTC. If the state-only conditions found in the PTCs are to remain in this permit, the specific condition should be included rather than referenced. One of the purposes of the operating permit is to gather all requirements together, which this approach does not do. Most INEEL PTCs have the same permit number making it difficult to identify the referenced PTC. Individual copies of the PTCs will not necessarily be available to the inspector or general public, making it difficult to identify the requirements.

Response # 4

All state-only permit conditions have been removed from the PTC and all applicable requirements are included in the permit. There are now no references to PTC's as requested.

Comment # 5

General Comment DEQ has not been delegated authority to regulate radionuclide emissions except to require source registration, so all the radionuclide-limiting conditions doing so should be removed.

The INEEL requests that all "state-only" radionuclide-associated permit conditions be removed from the draft permit and the Statement of Basis. These conditions are not an applicable requirement.

As stated in both the federal and state rules, only applicable requirements are to be addressed in the Tier I Permit. The Statement of Basis repeatedly states that radionuclide-associated permit conditions are "not an applicable requirement." As an example, the following statement is from page 52: "This permit condition is not an applicable requirement by definition (found in IDAPA 58.01.01.008.03.b) because it relates to assuring compliance with the state's toxic substances regulation (IDAPA 58.01.01.161)."

(Also corresponds to comments: : 10,12, 14, 19, 28, 29, 30, 31, 48, 50, 52, 53, 54, 55, 56, 57, 66, 67, 72, 73, 74, 75, 82, 84, 85, 86, 87, 89, 90, 98, 99, 100, 101, 102, and 103)

Response # 5

All state-only permit conditions have been removed from the permit for radionuclides and all other toxic air pollutants.

The National Emissions Standards for Emissions of Radionuclides other than Radon from Department of Energy Facilities (40 CFR 61, Subpart H) is an applicable requirement as defined by IDAPA 58.01.01.008.03 and is required to be in the Tier I operating permit.

Comment # 6

General Comment INEEL requests that the rules will take precedence over the permit condition in all cases when the permit conflicts with the rules. For example, 2.9 indicates that in case of a conflict between this condition and Sections 130 through 136 of IDAPA 58.01.01, the rules take precedence over the permit.

Response # 6

Sections 130 through 136 are only partially included in the Tier I operating permit. Since the entire content of the rule is not included EPA dictated that a clarification be added that if there is a conflict then the rule takes precedence. INEEL has not identified, and DEQ is not aware of, any other similar circumstances in the Tier I operating permit therefore there is no need to add this provision.

The Tier I permit contains all applicable requirements that apply and there is no conflict between them and the rules. INEEL must comply with all provisions. For instance affected boilers must comply with both the New Source Performance Standard (NSPS) opacity standard and the opacity limitations in the *Rules for the Control of Air Pollution in Idaho (Rules)*. If the permit where amended to state if there is a conflict between the permit term and the rule then rule takes precedence it may lead the permittee to incorrectly interpret that Idaho *Rules* takes precedence over the federal NSPS regulations or vise-versa.

Comment # 7

General Comment The INEEL is requesting the addition of a "sunset clause" for the purpose of suspending or eliminating permit conditions as source operations are suspended or eliminated. This facility is currently undergoing a significant footprint reduction; many sources are planned for demolition during the period the permit will be effective. Similarly, many of our sources are temporarily mothballed for seasonal sources. A sunset clause will reduce unnecessary administrative burdens for both DEQ and the INEEL.

INEEL proposes the following language be added to the permit:

The permittee is not required to conduct the monitoring and associated recordkeeping for any emission unit if the emission unit did not operate at any time between required monitoring events, provided the following conditions are met:

a) in the case of permanent shut down of the emission unit:

i. the permittee makes a contemporaneous record in a log or file maintained on site of the date that the emission unit ceased operation.

b) in the case of a temporary shut down of the emission unit:

i. the permittee makes a contemporaneous record in a log or file maintained on site of the date that the emission unit ceased operation and the reason why the emission unit did not operate.

ii) The permittee makes a contemporaneous record in a log or file maintained on site of the date that the emission unit resumed operation.

Response # 7

The INEEL's requested language was added to section 2.22 of the permit.

Comment

Numerous comments were provided to correct typographical errors; requests were made for complete rule/requirement citations, requests for grammatical corrections and requests for general corrections.

(Corresponds to facility provided comments numbers: 8, 15, 16, 18, 20, 21, 22, 35, 37, 38, 39, 41, 42, 43, 44, 44, 46, 49, 60, 64, 71, 74, 78, 80, 81, 84, 88, 89, 91, 92, 95 and 104)

Response

The corrections were made as requested.

Comment

Numerous comments were received to either delete or change underlying applicable requirements. Comments were received to remove applicable requirement because the emission unit or activity is an insignificant activity.

(Corresponds to facility provided comments numbers: 11, 13, 23, 24, 25, 26, 27, 28, 32, 33, 34, 36, 39, 40, 41, 42, 45, 51, 58, 59, 61, 62, 65, 68, 69, 70, 76, 77, 79, 82, 83, 93 and 96)

Response

The Tier I operating permit must contain all existing applicable requirements per IDAPA 58.01.01.322.03. The underlying applicable requirements can not be changed by the Tier I operating permit process. The underlying applicable requirement must be changed first, then the Tier I operating permit can be changed to reflect the new condition.

No emission unit or activity subject to an applicable requirement shall qualify as an insignificant activity in accordance with IDAPA 58.01.01.317. Emission units that are specifically regulated in a PTC with an emission limitation, operating or monitoring requirement can not quality as insignificant activities because these are applicable requirements.

Consent orders concerning air quality issues are applicable requirements as defined by IDAPA 58.01.01.008.03.f and must be included in the Tier I operating permit.

Comment #19

Delete the odor standard and corresponding record keeping listed at Section 2.5 and 2.6 because it is not an applicable requirement.

Response #19

The odor regulation has been removed from the Tier I operating permit as requested. It is not an applicable requirement because it is not part of Idaho's State Implementation Plan.

Comment - #17 and #97

INEEL commented that the Tier I operating permit contains conditions which do not occur in underlying permits.

Response #17 and #97

Where underlying applicable requirements occur without sufficient monitoring to assure compliance provisions were added to the Tier I operating permit to assure compliance in accordance with IDAPA 58.01.01.322.06.

Comment #47

In the process descriptions of Sections 5.2, 5.3, 5.4, 5.5 delete the words "of some" in the first sentences of the first paragraphs. This is in reference to what emissions units that are regulated by the permit.

Response #47

Sections 5.3, 5.4 and 5.5 of the draft permit have been deleted because they contained state-only permit requirements. Section 5.2 remains as drafted with the words "of some" included. Not all of the emissions units that are permitted are listed in Section 5.2. Several emissions units are regulated by the facility-wide permit conditions of Section 2, consequently Section 5.2 lists only "some" of the emissions units regulated by the permit.

Comment #63

Change all annual limits in Section 8 of the permit that are listed as limits "per consecutive 12-months" to "annual calendar year limits". The statement of basis indicates clearly that the limits were originally issued as "annual calendar year limits".

Response #63

All annual emission limits (tons per year) in Section 8 of the Tier I operating permit were issued in a PTC on May 20, 2004. These emissions limits were issued at a time when "year" was not defined by the Rules for the Control of Air Pollution in Idaho. The statement of basis does not indicate these emission limits were originally issued as "annual calendar year limits".

For clarification purposes the Tier I operating permit specifies whether these annual emissions limits are based on a "calendar year" or based on "any consecutive 12-months". The annual emission limits that are greater than 0.05 tons per year are clearly specified as limits per "any consecutive 12-months" and emission limits less than 0.05 tons per year are now clearly specified as limits per "calendar year". The associated monitoring and recording has also been changed to reflect these changes. These determinations of whether the annual emissions limits are per "calendar year" or "consecutive 12-months" are based on DEQ's need to determine compliance in a timely manner considering the potential to emit of the emission unit. For those emissions units with emission limits less than 0.05 DEQ has determined that compliance determined at the end of each calendar year is sufficient, all other emissions units must demonstrate compliance per consecutive 12-months consistent with how DEQ regulates all other facilities.